DEMOGRAPHIC, HISTORICAL AND PSYCHOLOGICAL CHARACTERISTICS OF DANGEROUSNESS

By

SENAH ELIZABETH GREEN

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DEMOGRAPHIC, HISTORICAL AND PSYCHOLOGICAL CHARACTERISTICS OF DANGEROUSNESS

By

Senah Elizabeth Green

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Major Department: Psychology

As psychologists have become experts in the field of behavior, their interactions with the legal profession have expanded explosively. Many of these interactions have concerned the clinical and legal responsibilities regarding individual dangerousness. Mental health and legal professionals currently face escalating demands to predict individual violent behavior. The relevant theoretical, clinical and research literature covering criticisms of mental health professionals' response to these demands was reviewed. This study was designed to investigate potential biases and contaminations of subject populations used in earlier research. It was hypothesized that, due to the plea negotiation process, a shift from violent initial charges to convictions for non-violent crimes would be seen. More accurate differentiation between the psychological characteristics of violent and non-violent groups was predicted in analyses based on initial, behavior-based charges than in those based on the "convicted" charge.

While previous literature utilized maximum security prison inmates, this study surveyed all 776 individuals convicted in the criminal justice system of Alachua County, Florida, between August 1, 1977, and July 31, 1978. Demographic and life history information was collected on all subjects. Family history and mental status data were gathered on 238 individuals who remained in the Alachua County Corrections Center 72 hours after arrest. Psychological data were obtained on 39 subjects receiving evaluation as part of a court-ordered pre-sentence investigation. Diagnoses were available for those subjects referred for psychiatric consultation. Each subject was classified as violent or non-violent twice: first based on the "initial" charge described at time of arrest and second based on the "convicted" charge, the crime of which the subject was eventually convicted.

No significant differences were found in demographic or historical characteristics of violent and non-violent offenders. Significant differences were encountered in diagnoses and mental status exams of subject groups. Depressive neurosis, transient situational disturbance and non-psychotic organic brain syndrome with alcohol intoxication were found more frequently in violent offenders. Schizophrenia, other psychoses, personality disorders and alcoholism occurred almost exclusively in non-violent offenders. In mental status exams, violent subjects were rated more frequently as appearing slightly or markedly depressed. They were also rated as having slight intellectual impairments more frequently.

Comparisons of initial and "convicted" charges showed a shift from violent initial charges to non-violent convictions. One-half of those 81 subjects initially charged with violent crimes were convicted of non-violent crimes. None of the 695 offenders initially charged with non-violent crimes were convicted of violent crimes. It was suggested that use of the convicted charge to classify subjects in previous research may have resulted in spurious results.

Discriminant function analyses of personality data resulted in significant discriminations between subject groups. Violent offenders showed higher Hysteria an and Social Isolation but lower Hypochondriasis subscales on the MMPI than non-violent offenders. Violent subjects had higher Performance I.Q. and Vocabulary scores (WAIS), but their Comprehension and Digit Span scores were lower. Rorschach data indicated differences between violent subjects and non-violent subjects. Using discriminant functions, the original sample was correctly classified as violent or non-violent in 79 to 100% of the cases. Applied to an independent group of subjects, however, accuracy of predictions differed little from chance assignment to groups. Initial charge was shown to provide better discrimination between violent and non-violent groups than convicted charge.

Use of initial charge in classifying offender groups for dangerousness research was strongly advocated. Local detention facilities were promoted as research sites due to availability of initial charge data, broad sample of offender population represented, lack of bias from penal classification processes, and reduced influences from prison culture.

CHAPTER ONE

INTRODUCTION

As psychologists have become more widely recognized as "experts" in the field of behavior, their interactions with the legal professions have expanded explosively. Many of these interactions have revolved around the clinical and legal responsibilities inherent in addressing individual dangerousness. Whether they work in mental health centers, private practices, schools, hospitals, or other institutions, psychologists frequently must assess the potential for dangerous behavior in their clients. Any decision for involuntary hospitalization or treatment necessarily overlaps the concerns of the judicial system, charged with maintaining the careful balance between individual freedom and the community's right to protection. As consultants in the field of criminal law, psychologists may be called upon to reconstruct an individual's past behavior, to predict future behavior or to design programs for altering behavior. Here again dangerousness is frequently the focus. Considering specifically the demands for behavioral predictions, Schlesinger remarks that "the conclusion of several authors, reviewing the complexities of violence prediction, is that such prediction is futile. Yet in spite of this, clinical predictions of dangerousness are frequently ordered throughout the country" (1978, p. 40). This role within the judicial system is admittedly a new one for the mental health professional. Relative to its four thousand year history, however, the consideration of individual behavior, including the assessment of dangerousness, is a relatively new role for the judicial system also. The potential for dangerous behavior is now routinely evaluated at several points in the criminal justice system. These points involve questions of bail or pretrial incarceration, type and length of sentence, level of institutional custody, and eligibility for parole (Koerin, 1978; Schlesinger, 1978). Rector (1973) states that

> The problem of identifying, diagnosing and sentencing persons who are dangerous probably represents the greatest unresolved problem the criminal justice system faces . . . . Somehow and soon, both law and psychiatry must respond to the need and the demand better that either have in the past. Criminal code revision and sentencing must be based upon empirical knowledge and research rather than uninformed opinion and emotional response to the fear of crime. (pp. 186-187)

It is apparent that both mental health and legal professionals are currently facing escalating demands revolving around the prediction of individual violent behavior, demands which neither is fully prepared to meet. As the sole profession with a basic commitment to research into individual human behavior, the psychologist seems the logical candidate to address this situation. In considering the development of those demands, this work will review the judicial system's growth of interest in individual behavior culminating in the current need for predicting dangerousness. After acknowledging the criticisms of the mental health professional's response to this need, the relevant theoretical, clinical and research literature to date will be reviewed. The current study will then be presented as a response to limitations in the earlier research. This work is viewed as a further step toward an adequate response to existing demands for the prediction of individual dangerousness.

Individual Behavior and Criminal Law

The Classical School of Law, based on the code of Hammurabi (2100 B.C.), incorporated no consideration of the individual or the circumstances of his behavior. The original code demanded punishment as retaliation for the crime committed: an eye for an eye, a tooth for a tooth. Later appearing in Mosaic Law, the Classical philosophy influenced Christianity and criminal and civil law up to the current judicial system. Abrahamsen (1960) remarked that in the classical school:

> unconcern with the fate of the criminal was a direct result of the belief in the depravity of man. Since the human being was considered evil by nature, it made no difference if he was sentenced to die for some trivial offense. The doctrine of freedom of the will implied that the criminal's free will produced his own antisocial or criminal behavior. Naturally, then, it seemed superfluous to inquire into any causes at all for the crime. (p. 3)

The retributive approach to crime and punishment continued until the late eighteenth century's Age of Reason when French humanitarian writers began to protest. These writers, including in their ranks Voltaire, Montesquieu, and Rousseau, condemned the approach as cruel and inhuman. Such works promoting the principles of human dignity were developed into the first comprehensive theory of criminal justice by Caesare di Beccaria. In 1764 his _On Crimes and Punishments_ stated that punishment should be administered only for overt acts rather than as an attempt to enforce vague standards of moral virtues. Furthermore, the range of appropriate punishments should be specified by law and should be in proportion to the crime (Kittrie, 1971). While the French Code of 1791 showed the influence of these writers' efforts, it was still classical in content. Offenders were assured equivalent punishment for equivalent crimes. The code, however, completely disregarded the personality of the criminal and allowed no consideration of his age, or intellectual or psychological disabilities, even when these deficits were quite severe (Abrahamsen, 1960).

While these trends were influencing Europe, the Age of Reason saw parallel developments in England. Humanitarian writers such as John Howard and Jeremy Bentham proposed classification systems for offenders, rehabilitation programs, and the prevention of future crime through the recognition and removal of its causes. The efforts of both English and European humanitarian writers further pointed out the presumption of free will then existing in the criminal code. If a man has free will to choose among several courses of action, his choice of the prohibited action then becomes sufficient justification to punish him. Without free will, punishment becomes unjustified and probably ineffective (Kittrie, 1971). Through such reasoning, both groups sought the recognition of mentally ill persons as individuals undeserving of punishment under the criminal code.

The French Code of 1810 marked the birth of the Neoclassical School of legal thought. As specified by these statutes, not only should the degree of punishment be proportional to the crime, but also it should be determined in accordance with the personality make-up of the offender. While this code represented a progressive philosophical jump for the legal system, in practice personality was ignored except in the most extreme cases. In France, then, the transition from Classicial to Neoclassical thought represented merely the change from unvarying punishment to a more flexible system which might exclude the child and the retarded or psychotic individual from punishment (Abrahamsen, 1960).

In England the transition from a Classical, retributive approach to law to the more flexible Neoclassical approach was seen in the M'Naughten rule. As early as 1584, William Lambard had set forth what may be viewed as the forerunner of the insanity defense: "If a man or a natural fool, or a lunatic in the time of his lunacy, or a child who apparently has no knowledge of good or evil do kill a man, this is no felonious act . . . for they cannot be said to have any understanding will" (Brooks, 1974, p. 136). By 1724, this concept had grown into the "Wild Beast" test. This provided for exculpation if the individual "doth not know what he is doing, nor more than . . . a wild beast" (Brooks, 1974, p. 136). However, this exemption had not been systematized and had been inconsistently applied (Kittrie, 1971). These rather primitive, but nonetheless more humane, views were eventually developed into a coherent, relatively enlightened approach to criminal responsibility: Dr. Isaac Ray's 1838 publication of Medical Jurisprudence of Insanity. This text provided the basis for the initial M'Naughten decision. While the progressive impact of this case on the common law was later obscured by Chief Justice Tindal's responses to Queen Victoria's criticism, the M'Naughten decision represented a first systematic move toward an individualized approach to criminal behavior. The application of these concepts, however, was still limited to the determination of the guilt and the punishment of the child, the mentally incompetent and the psychotic (Brooks, 1974).

Casare Lombroso's application of Darwin's biological theories to the criminal provided the basis for a massive change in approach to the criminal. Lombroso (1836-1909) stated that the criminal's behavior represented not free choice but an expression of his innate characteristics. Similar to Sheldon's later work on body types, he hypothesized that these inborn traits should also be seen in the anatomical, as well as behavioral, characteristics of criminals (MacDonald, 1958). By questioning the element of free will in criminal behavior, this theory again questioned the individual's complete responsibility for his actions. Lombroso's germinal hypothesis was extended into other disciplines by his pupils. Among them was Italian criminal law professor Enrico Ferri. His many books on criminal sociology attempted to wed the constitutional deterministic theories with theories describing crime as a phenomenon of social organization. Joined through Ferri's eclectic approach, the adherents to both social and constitutional approaches gathered to advocate major reforms in the criminal justice system. They proposed that when an individual has been found to have committed a crime, the law should not be concerned with questions of guilt and its degrees nor with measuring a fit punishment. It should instead humanely apply whatever measures are necessary to protect society from further transgressions by the same individual. In determining these measures, the law should take particular account of the offender's heredity and the environmental factors that "caused" his antisocial behavior. "Punishment should fit the individual, not the offense" (Ferri, 1917, p. 242).

The temporal contiguity between Ferri's work and the early developmental years of psychology and psychiatry gave impetus to the claims of behavioral scientists that the causes of antisocial behavior lay within their discipline. The emphasis in studying crime and the criminal therefore shifted from social and hereditary factors to the internal psychological makeup of the individual offender (Kittrie, 1971). As the impact of psychological concepts on society expanded through the twentieth century, the judicial system responded with new and better defined concepts of insanity and competency. Criminal responsibility evolved from an "all or nothing" concept to a graduated factor which may be reflected at a wide variety of points in the legal process. An individual may be incompetent to stand trial, not guilty by reason of insanity, guilty of a lesser charge due to diminished responsibility, guilty as charged but "sentenced to treatment" as a member of a particular class of offenders, or simply committed involuntarily after charges have been dropped. Furthermore, the criminal justice system now views the offender as an individual, making individualized decisions regarding his appropriateness for bond, the length and type of incarceration needed, the appropriateness of probation and parole, and the conditions under which these may be granted.

As psychologists and psychiatrists have been asked to play a role in making these determinations, they have been faced with an ever widening range of theoretical questions about criminal behavior. Are all cases of delinquency and crime manifestations at some level of psychological disorders, or can it be established that these disturbances characterize only some criminals and not others? Are all of these individuals characterized as "disturbed" affected in the same way, or are there subgroups? And, finally, can any of these subgroups be identified as characteristically violent or dangerous to others? The ability to understand and to discriminate those individuals capable of violent behavior from those who are not would clearly provide an increasingly firm foundation for addressing the above questions and responding to the relatively new demands of the criminal justice system for insight into individual behavior.

Involuntary Commitment: The Parens Patriae and Police Powers of the Civil Court

Questions of dangerousness are not limited to the field of criminal law. Within the civil court, involuntary commitment proceedings frequently involve the prediction of an individual's dangerousness. These statutes developed primarily from British common law. Continuing the Roman legal tradition in which the head of the family maintained supervision over sons and daughters of any age, medieval feudal lords maintained the responsibility for the mentally disordered individuals of their manors. As early as 1324, Edward II began the shift of the *parens* patriae role from the feudal lords to the King as "father of the country" (Kittrie, 1971). His statute De Prerogativa Regis clearly delineated the sovereign's responsibility toward the property of the mentally ill. By the time of the settling of the American colonies, the King had the authority to act as "the general guardian of all infants, idiots, and lunatics" ("Civil Commitment," 1974, p. 1207). In acting as parens patriae, the King or his representative was required to promote the interests of his wards and was not empowered to sacrifice the ward's welfare for the welfare of others. After the American Revolution, the parens patriae role in the United States was vested in the legislatures, which often delegated the protection of minors and incompetents to the courts. The use of this power to detain the mentally ill in order to facilitate their rehabilitation is commonly traced to an 1845 decision of the Massachusetts Supreme Judicial Court.

> In In Re Oakes Chief Justice Shaw held that "the great law of humanity justified depriving an insane person of his liberty whenever his own safety or that of others required(d) that he should be restrained for a certain time, and (when) restraint (was) necessary for his restoration, or (would) be conducive thereto." Courts and legislatures since Oakes have generally assumed that the parens patriae power justifies the involuntary commitment of the mentally ill for care and treatment or protection from harm. ("Civil Commitment," 1974, p. 1209-1210)

Case law has acknowledged further the right of the state to make laws and regulations for the protection of the public health, safety, welfare and morals. When court commitment is used to protect a societal interest rather than to further the interest of the mentally ill individual, it constitutes an exercise of the "police power" rather than the parens patriae role of the state. In order to justify a valid exercise of the police power, the mentally ill individual's dangerousness to others must be demonstrated ("Civil Commitment," 1974). While in most states the involuntary commitment of noncriminal mental patients is justified under the doctrine of parens patriae, Harvard Law Review ("Civil Commitment," 1974) notes a current trend toward narrowing the class of commitable individuals to the dangerous metally ill. Laves (1975) reports that this narrowing of commitment statutes has already been accomplished in nine states. It is evident that if such a trend continues, mental health and legal professionals will be faced with the question of an individual's potential for dangerous behavior even more frequently than at present.

The Problems in Defining and Predicting Dangerousness

It is clear from the above discussion that the need for prediction of dangerousness is firmly entrenched in the legal system. Yet professionals from both legal and behavioral fields continue to struggle with the task. One of the primary reasons for this is the difficulty in defining the basic concepts. Katz and Goldstein (1960) state that

> in a democratic society the function of delimiting dangerousness . . . belongs to the community. Translating community values and policies into an operational definition of dangerousness has been assigned to legislators as representatives and judges as construers of legislative determinations, and not to any particular administrative or professional group including psychiatrists. (p. 407)

Bazelon's (Brooks, 1974) presentations of Millard v. Harris and Cross v. Harris provide the basic components to be considered in the resulting legal definition of dangerousness: the severity, probability and frequency of the behavior. To meet this definition, an individual must be likely to engage in an act which will result in substantial injury to others, or to engage frequently in a less injurious behavior. Furthermore, as demonstrated in Rosenfield v. Overholster, these behaviors must be likely to occur "in the reasonably foreseeable future" (Rubin, 1974, p. 399). Although this definition provides a general outline for classifying behaviors as dangerous, considerable latitude remains in interpreting the component terms. For example, Harvard Law Review ("Civil Commitment," 1974) states that the predicted harm to others must be personal injury and not property damage or "some offense against public decency" (p. 1288). In contrast, Laves (1975) notes that case law includes instances where the probable "check bouncer" was found to be dangerous to others. Brooks (1974) summarizes the situation well in commenting that "definitions of what is 'dangerous' tend to be as diverse as the views of individual judges, courts and jurisdictions" (p. 680).

To the mental health professional, dangerousness is conceptualized as part of a broader pattern. Kozol, Boucher and Garofolo (1972) remark that the essence of dangerous behavior is anger toward and a lack of feeling for others. They define the dangerous person as

> one who has actually inflicted or attempted to inflict serious physical injury on another person; harbors anger, hostility and resentment; enjoys witnessing or inflicting suffering; lacks altruistic and compassionate concern for others; sees himself as a victim rather than as an aggressor; resents or rejects authority; is primarily concerned with his own satisfaction and relief from his own discomfort; is intolerant of frustration or delay of his satisfaction; lacks impulse control; has immature

> attitudes toward social responsibility; lacks insight into his own psychological structure; and who distorts his perceptions of reality in accordance with his own wishes and needs. (p. 378)

This definition is nearly identical with the classical stereotype of the antisocial personality. Megargee (1966) extends the definition of dangerousness even further to include the overcontrolled individual who is usually quite rigid due to strong generalized inhibitions. When these controls are broken, however, he acts out in a sudden, extremely violent manner. Solomon and Kleeman (1971) and Kunce et al. (1976) promote a definition which includes individuals with disease or damage to the temporal lobe or limbic area in the potentially dangerous category.

It is apparent that discrepancies regarding the definition of dangerousness exist not only within the mental health and legal fields, but also between the two. In responding to the legal need to predict dangerousness, a clinician is therefore faced with the confusion present in both fields. He is also forced to shift from the broader style of conceptualizing groups or patterns of behaviors into a narrow definition based on frequency and severity. Clearly this compounds the difficulties in predicting individual dangerousness to be discussed next.

In recent years the mental health professional addressing the issue of an individual's dangerousness has been sharply criticized (Ziskin, 1970; Wenk, Robison and Smith, 1972; "Civil Commitment," 1974; Ennis and Litwack, 1974; Laves, 1975; Monahan and Cummings, 1975; Koerin, 1978). Their testimony has been compared to "flipping coins in the courtroom" (Ennis and Litwack, 1974) with Ziskin (1970) advising lawyers that "the testifying expert should be led to admit that the chances of another expert, similarly qualified, agreeing with his findings are barely better than 50-50" (p. 126). These writers cite results of studies such as those on "Operation Baxstrom." The 969 patients released from New York Department of Corrections hospitals as the result of the Baxstrom v. Harold decision were subject to several follow-up studies. Although psychiatrists had found these individuals too dangerous for release or for transfer to civil hospitals, one third of the patients were living in the community 4 1/2 years later. Only 17% had been rearrested, most often for traffic violations or misdemeanors, and only 2.7% had been returned to hospitals for the criminally insane (Steadman, 1973). Such discrepancies between prediction and outcome have fueled both criticism of the predictors and efforts to find better methods of prediction. As will be shown, however, the task is inherently a difficult one.

MacDonald (1958) and Solomon (1974) have noted the most basic difficulty in predicting dangerousness by pointing out the network of factors which may affect this behavior. Social, biological and psychological factors may all be operating. Furthermore, different combinations of these factors may be operating in different individuals. Looking specifically to the psychological factors for an example, the psychotic individual's motivation for dangerous behavior may be totally different from that of a neurotic individual. It is possible, therefore, that a wide variety of unique stimulus patterns, including environmental, historical, biological and psychological variables, may produce the same behavior. Obviously the attempt to identify the potent factors and their relevant combinations is an extremely complex one.

In attempting to identify statistically the factors relevant to dangerousness and to develop predictors, additional problems are encountered due to the low incidence of these behaviors. Even with an extremely accurate test, the number of individuals incorrectly identified as dangerous ("false positives") may be far greater than the number of persons correctly identified as dangerous. Livermore, Malmquist and Meehl (1974) provide an excellent example of this problem:

> Assume that one person out of a thousand will kill. Assume also that an exceptionally accurate test is created which differentiates with ninety-five percent effectiveness those who will kill from those who will not. If 100,000 people were tested, out of the 100 who would kill 95 would be isolated. Unfortunately, out of the 99,900 who would not kill, 4,995 people would also be isolated as potential killers. (pp.684-685)

Clearly such a test, used as the sole predictive instrument, is useless.

Due to the difficulties involved in statistical predictions of low incidence behaviors, clinical judgment will remain a necessary part of the predictive process. However, Stone (1976) notes appropriately that the professional attempting to predict dangerous behavior is faced with additional environmental pressures which assure overprediction. First, he lacks corrective feedback concerning his decision. When an individual is confined, the predictor has no chance to learn if he is right or wrong. Second, the consequences to the predictor are far more severe if he incorrectly predicts that an individual will not behave dangerously. If someone predicted to behave violently is confined, the prediction cannot be wrong. If the individual is released and commits another violent crime, the predictor, and everyone else, will read about it on the front page. And third, a professional can easily rationalize overprediction as a vehicle for getting the individual into treatment.

Unfortunately the mental health professional has little specific training in the assessment or prediction of dangerousness to counterbalance these environmental pressures toward overprediction. Both Rappeport (1967) and Rubin (1972) have noted that the literature is sparse, disorganized and of little help to the professional seeking useful guidelines for prediction. Furthermore, training based on the medical model or tradition promotes "false positives." As Laves (1975) remarks, the decision-rule in law is "when in doubt--acquit," thus avoiding at all costs the false positive or erroneous conviction. In medicine the rule is the reverse: when in doubt--continue to suspect illness. The emphasis in this training is therefore to avoid false negatives. As a consequence, the professional is primed for overprediction by his training, his environment, and his lack of concrete guidelines.

It is apparent that psychologists and psychiatrists are poorly prepared to predict dangerousness based on accurate classification into the well-defined, well-understood behavioral group discussed by Glasner, Kenefick and O'Leary (1974) and Gibbons (1975). However, the demand for such predictions is well entrenched within the legal system. In spite of the criticisms regarding their ability to fulfill this demand, the task remains with these professionals.

CHAPTER TWO

CURRENT CONCEPTS OF DANGEROUSNESS: THEORIES, STATISTICS AND CLINICAL OBSERVATIONS

In their attempts to improve the understanding of the dangerous individual, investigators have examined the topic from a wide range of perspectives. Some writers have studied the continuum of human aggressive behaviors. Others have viewed criminal populations searching for factors correlating with deviant behavior. Still others have focused specifically on violent behavior, using both statistical and clinical data in their efforts to understand the phenomenon. This discussion will review the current concepts of dangerousness from each of these perspectives. Beginning with the broad, theory-based literature on human aggression, the focus will gradually be narrowed to the clinical data on dangerous individuals.

Human Aggression

While human aggression is a universally recognized concept, it is a difficult one to define effectively. Goldstein (1975) presents what is probably the most common definition of aggression: behavior whose intent is the physical or psychological injury of another person. The use of intent to define aggression, however, results in some limitations. In many instances, the intent of an injurious behavior may be the achievement of a particular goal for the aggressor, with the "aggressive" act serving merely as the means to that end (e.g. robbery). This type of "instrumental aggression" in which the injury results from lack of concern rather than intent, is not included in Goldstein's definition.

Behaviorists, such as Bandura, have utilized a definition of aggression which eliminates any consideration of motivation or intent. For them, aggression is any behavior that results in personal injury, whether that injury is psychological or physical (Bandura, 1973). This definition, too, has its drawbacks. By looking merely at the result of the action, behaviors whose outcome is an accidental injury are included as aggressive. As the purpose of this discussion is the eventual understanding of human dangerousness, a definition of aggression will be used which combines both the behavioral and motivational approaches to aggression and which is consistent with the concept of dangerousness. Human aggression will be defined as any behavior whose intent is the physical or psychological injury of another person or which results in personal injury due to unconcern for the effects of the behavior on others.

Theories of human aggression generally fall into four categories: ethological, behavioral, sociological and interactional. Ethological or instinctivist theories date from the work of Charles Darwin. These theorists hypothesize that since "there is ample evidence that our animal ancestors were instinctively violent beings, and since we have evolved from them, we too must be the bearers of destructive impulses in our genetic composition" (Goldstein, 1975, p. 5). As the result of this influence, psychologists such as William James and W. McDougall drew up long lists of individual instincts which were supposed to motivate corresponding kinds of behavior (Fromm, 1973). Goldstein (1975) remarks that twentieth century thinking leans toward the instinctivist perspective on human aggression due to three major influences: accounts of aggression by ethologists Konrad Lorenz, Desmond Morris and Robert Ardrey; the pervasiveness of Freudian theory; and the dramatic research on electrical and chemical stimulation of the brain.

Lorenz, probably the most influential of the ethologists, states that aggression is not primarily a reaction to external stimuli. Instead, he postulates that energy specific for an instinctive act (e.g. aggression) accumulates continuously in the neural centers for that behavior pattern. If enough energy has accumulated, the pattern is likely to occur spontaneously regardless of how adequate the outer stimulus is (Fromm, 1973).

Although still viewed as an Instinctivist, Freud's theory differs in that it allows some environmental modification of the instincts. Freud postulated the existence of two competing instincts: a "life" instinct (Eros) and a "death" instinct (Thanatos). He too felt that aggression was not essentially a reaction to stimuli, but the result of the death instinct creating self- or other-destructive impulses (Fromm, 1973). In response to these destructive impulses, however, not everyone will behave aggressively. A variety of defense mechanisms may have developed during childhood interactions with the environment. These mechanisms may be used to transform and to rechannel these impulses, preventing their direct, aggressive expression (Goldstein, 1975).

Delgado's (1969) experimentation with electrical stimulation of the brain is a well-publicized example of the kind of dramatic, physiology-based literature which further promotes the ethological view. He reports eliciting a variety of offensive activities through stimulation of points in the thalamus and the anterior and lateral hypothalamus. This would appear to support further the idea of genetically-coded behavior patterns, firmly entrenched in human physiology.

There are, however, several serious problems with the ethologists' arguments. First, the likelihood that man is instinctively aggressive would be increased if all animals were conclusively shown to be aggressive. But "the evidence that animals, at least the higher primates, are instinctively aggressive is not at all convincing" (Goldstein, 1975, p. 5). Second, the possibility would still exist that homo sapiens, having evolved as an independent species, is not aggressive. Because man can behave like lower organisms does not mean that this is the way he must behave (Goldstein, 1975). Third, evidence from cultural anthropology seems to indicate that primitive peoples exist where violence is very rare. In contemporary societies, regional, urban-rural, and other variations in the incidence of aggression also suggest the fruitfulness of a socio-cultural explanation. In the United States, for example, 1) the South has more violent crimes per capita than the North or West; 2) blacks have a higher arrest rate for violent crimes than whites; 3) middle-class persons are generally less violent than working-class persons; and 4) rural areas usually produce less violence than urban areas. Such variations are better explained by social organization than by genetics (Toby, 1966; Gorney, 1971).

Learning-based, stimulus-bound theories of aggression do not rely on a conception of man as innately violent. Dollard and Miller (1950) described aggression as one of a number of possible responses to frustration. They held that this response cannot, however, occur in the absence of frustration. Furthermore, it is inhibited by the anticipation of punishment (Kolb, 1972). This transforms aggression from the ethologists' spontaneously occurring, innate behavior into a stimulus-related, modifiable response.

Strict behaviorists such as Skinner and Bandura insist that psychology need not be concerned with impulses, drives, needs, or any other subjective event. Behavior is strictly analyzed in terms of the stimuli that evoke it and the consequences that alter it. Specifically addressing the Frustration-Aggression hypothesis, Bandura (1973) states that people do not have to be angered or emotionally aroused to behave aggressively. A culture can produce highly aggressive people, while keeping frustration at a low level, by valuing aggressive accomplishments, furnishing successful aggressive models, and ensuring that aggressive actions secure rewarding effects. Berkowitz (1964), however, maintains that some aggression-evoking cue, whether internal or external, must be present to elicit the behavior.

Hirschi (1969) divides the sociological perspectives on deviant behavior, including aggression, into three groups. Strain theories, such as those proposed by Merton and Parsons, suggest that legitimate desires which social conformity cannot satisfy force a person into deviance. Aggression would therefore result from discontent, frustration or deprivation. Control theories hold that a person is free to behave in a socially deviant manner because his ties to the conventional order have somehow been broken. Within this system the aggressive individual would be one who has managed to free himself from learned, sociocultural constraints against violence. The third group of theories notes that some individuals conform to a set of standards not accepted by the larger society. Within those subgroups, therefore, aggressive behavior may be supported and prescribed, so that by behaving violently an individual gains in status and recognition. Individuals within this last category may form what Randolph, Richardson and Johnson (1961) refer to as the "socialized criminal."

Interaction theories of aggression, such as that proposed by Goldstein (1975), hypothesize that "aggressive behavior is a complex act, based on a number of simultaneously acting factors. In order for aggression to occur, there must be some impetus to aggress, inhibitions against aggression must be overcome, and the situation -- in terms of the opportunity and ability to aggress and the availability of a target -- must be appropriate" (Goldstein, 1975, p. 19). Abrahamsen (1960) offers a second look at interactional theories in his combination of sociological and situational factors with psychological characteristics. He suggests that an individual may be led into criminal activities in three ways. First, criminal behavior may occur when antisocial inclinations are exposed to criminal influences and are further stimulated by a precipitating event. Second, if there is a strong unconscious desire for punishment, an individual may commit a crime in order to obtain that punishment. Third, a person who feels emotionally weak and insecure may develop a defensive, aggressive attitude. Expression of this "false" aggressiveness may result in antisocial or criminal acts. Aggressive criminal behavior would therefore be conceptualized as a combination of social influences, environmental stimuli, unconscious guilt, and emotional insecurity. These theories incorporate both short-term (situational) factors as well as long-term (personality, learning and culture). In combining basic ideas from the broad range of available theories, the interactionist approach may be seen as an acknowledgement of the complexity of aggressive behavior.

Demographic and Life History Research on Dangerousness

In the move from theory to the empirical examination of dangerousness, criminal populations have most frequently provided the samples studied. These groups offer a higher incidence of violent behaviors than the general population. Furthermore, they provide insight into an overall class of deviant behaviors of which violent behaviors are a subset. The influences of aggression theories will be seen in references to aggressive drives, physiological factors, the social environment, and psychological characteristics. Throughout the discussion of empirical studies, the characteristics of general criminal populations will be reviewed first, followed by specific examinations of the violent subgroup.

As a whole, the criminal population is numerically dominated by younger males. The National Criminal Justice Information and Statistics Service (National Prisoner Statistics: Special Report, 1976) reports that in 1974, of the 191,400 prisoners incarcerated in state correctional facilities, only 3% were women. Three-fourths of these prisoners were between the ages of 18 and 34, with a mean age of 27 years. In a study of 223 felons, Guze (1976) reports that men aged 40 and older have significantly lower rearrest and reimprisonment rates. He attributes this drop in criminal recidivism as middle age is approached to a maturational decrease in aggressive drives. Coupled with Poorman, Donnerstein and Donnerstein's (1976) data showing developmental increases in aggression through a boy's childhood, it then appears that aggression in men maintains a curvilinear relationship with age. As no age differences are seen between groups of violent and non-violent offenders, parallel patterns of declining recidivism with middle age may be expected in both groups (Clark, 1978). Clark additionally compares violent and non-violent offenders on marital history, education and ethnicity. He notes no differences in educational levels, but more frequent divorce and membership in a minority ethnic group among violent offenders.

Alcohol and Criminal Behavior

Alcohol abuse has become an important factor in understanding criminal groups, simply because it appears so frequently among the life history variables. The relationship indicated among these variables is not, however, a straightforward one. Lindelius and Salum (1976) note that while alcoholics have high crime and recidivism rates, their offenses are usually against property and are seldom violent. On the other hand, significant alcohol intoxication is implicated in one- to two-thirds of the murders, attempted murders, manslaughters, rapes and assaults committed (Solursh, 1975). Bach-y-Rita et al. (1971) report intoxication as a precursor to violence in more than half of the patients they evaluated for explosive behavioral outbursts. While Solursh finds that alcohol abuse prior to the crime varies directly with the severity of the crime in a pre-trial population, he points out that in populations of convicted felons, alcohol abuse varies inversely with the severity of the charge. He postulates that this may be due to use of the intoxicated state by the attorney to mitigate the offense and to reduce the charge. The resulting incidences of intoxication during the reduced crime then become murder, 33%, attempted murder, 38%, manslaughter, 54%, and assault, 61% (Solursh, 1975).

These data then suggest that alcohol interacts with crime in two distinct ways. Chronic alcoholism appears to result in a group of jobless, homeless men who maintain a revolving-door relationship with the legal system. They are, however, generally involved in less serious, nonviolent property crimes (Lindelius and Salum, 1976). A second distinct group appears to be those individiauls who show intoxication as a part of a pattern of violent behavior (Bach-y-Rita et al., 1971; Solursh, 1975).

Family History and Criminal Behavior

Disorganized family histories have been consistently linked to criminal behavior (Abrahamsen, 1960; Saul, 1972; Menninger and Modlin, 1971; Toby, 1966; Glueck and Glueck, 1940, 1960, 1962, 1970; Okasha, Sadek and Moneim, 1975; Stone, 1976; Guze, 1976). Guze (1976) states that

> It is clear that convicted felons characteristically come from severely disorganized families and social backgrounds. Poverty, homes broken by parental death, desertion, divorce, and separation; parental criminality and alcoholism; and restricted opportunities are nearly always present. (p. 131)

In addition to disruption on a sociological level, these families show a greater prevalence of unhealthy emotional conditions among the family members than do families not producing criminals. This family tension, most frequently manifested as hostility, hatred, resentment, nagging, or psychosomatic disorders, creates and maintains emotional disturbances in both children and parents (Abrahamsen, 1960). Severe or inconsistent parental figures, unwitting parental sanctions of antisocial behavior and separation from mother early in life are also noted by MacDonald (1958) as family situations conducive to the development of criminal behavior. While such disruptive factors are seen in the families of the general criminal population, they are particularly pronounced in the families of violent adolescents (Duncan and Duncan, 1971) and adults. Comparing groups of violent and non-violent offenders, Felthous and Yudowitz (1977) found that violent offenders reported injurious parental punishments, neglect and parental alcoholism at least 20% more frequently than non-violent subjects. Talcott Parsons (Toby, 1966) adds the father-absent or mother-dominated household to the list of environments primed for the development of violent men. Raised by their mothers, these men may adopt exaggerated patterns of roughness ("masculinity") in an attempt to repudiate their natural identification with their mothers.

While birth order and family size have been studied in juvenile offenders, they have not been addressed in adults. Hirschi (1969) reports that children from large families are more likely than children from small families to have committed delinquent acts. Middle children appear to be particularly vulnerable. It would seem reasonable to postulate that this sort of relationship between criminal behavior and birth order may be found in adult offenders, too. Yando, Zigler, and Litzinger's (1975) finding of differential response to social reinforcement by birth order and number of siblings further supports such a hypothesized relationship. They note that while middle children are more responsive to social reinforcers than first or only children, middle siblings are more easily frustrated when these reinforcers are not immediately forthcoming.

Psychiatric Expatients and Crime

The interaction between psychiatric illness (at a level requiring hospitalization) and criminal behavior is still a matter of debate. In 1965, Rappeport and Lassen reported that for some serious offenses, the psychiatric population had a higher arrest rate than the general population. Schizophrenic patients accounted for 20-30% of these arrests. A more recent study of 867 patients released from Manhattan's Bellevue Hospital (Zitrin, Hardesty, Burdock and Drossman, 1976) also found that these expatients had higher arrest rates for criminal behavior, including violent offenses, than the corresponding rates for their community. The investigators noted that the arrested patients were generally between the ages of 20 and 40 years with the range narrowing even further to 20 to 30 years for violent crimes. In addition, the percentage of alcohol and drug dependent clients among the arrestees was much higher than their percentage in the expatient population.

Many authors (Rappeport, 1967; Mesnikoff and Lauterbach, 1975; Zitrin et al., 1976) now admit that the literature on expatients' arrest rates is contradictory. Rappeport (1967) cites studies such as that by Pollock reporting that the arrest rates of patients released from New York hospitals in 1937 were 14 times lower than that of the general population. Brill and Malzberg's (Rappeport, 1967) survey of all male expatients aged 16 and over released from New York State Mental Hospitals between 1946-1948 is also presented. Over their 5.6 years observations period, these investigators found that the arrests of former mental hospital patients were concentrated in a relatively small, well-demarcated group of persons with previous criminal records. Their antisocial behavior was well correlated with factors which operate in the general population and not with factors of mental illness, except in a negative way. Based on these kinds of observations, Rappeport (1967) suggests that much of the conflict in the expatient literature is due to population variations in the percentage of patients showing criminal behavior prior to hospitalization. Studies which include large numbers of patients admitted as "criminally insane" can be expected to show higher rearrest rates in expatients. This does not, he concludes, necessitate a correlation between mental illness resulting in hospitalization and criminal behavior. Mesnikoff and Lauterbach (1975) concur with Rappeport's conclusions, but add that differences in hospital discharge policies and average length of inpatient treatment may also be contributing to these contradictions.

Guze's study of criminal behavior and psychiatric diagnosis provides an additional perspective on the issue of mental illness and crime. After studying incarcerated felons (Guze, 1976) and psychiatric outpatients (Guze, Woodruff and Clayton, 1974) in conjunction with their diagnoses and criminal histories, he states that "sociopathy, alcoholism and drug dependence are the psychiatric disorders characteristically associated with serious crime. Schizophrenia, primary affective disorders, anxiety neurosis, obsessional neurosis, phobic neurosis and brain syndromes are not" (Guze, 1976, p. 45). While confirming Zitrin's observation of the high arrest rates in drug and alcohol abusers, this suggests that "traditional" hospital settings with primarily schizophrenic, brain-damaged, manic-depressive or neurotic patients should report low incidences of criminal behavior on release. Those settings with large drug and alcohol treatment programs or with numerous referrals from the judicial system may report higher incidences of criminal behavior on release.

Subgroups Within the Criminal Population

While many researchers have viewed the criminal population as homogeneous, others have questioned this approach. Peterson, Pittman and O'Neal (1962) contrasted those individuals committing crimes against persons (potential or actual assaultive behavior) with those committing crimes against property (attempts to gain possession of something rightfully belonging to another without the use of force). In viewing 59 repeat offenders they found that 51 of these men had established stable criminal patterns, committing exclusively violent or property crimes. He characterized the violent crime group as having experienced early and often continuous disruption in their nuclear families. Their families were more frequently "broken" than those of the non-violent group. Their fathers or father-substitutes were more likely to be unemployed and to use strict but erratic disciplinary techniques. And they showed more close relatives who were psychotic or chronic criminals than men with non-violent patterns. Although the violent and non-violent groups did not differ in psychiatric diagnoses, the violent group was felt to be significantly more disturbed.

In examining the eight individuals with criminal records reflecting both violent and non-violent crimes, Peterson et al. found that the mixed pattern was not due to a shift from one consistent pattern to another. Instead these records showed extremely high arrest rates with no time periods devoted exclusively to any one type of crime. The mean number of arrests for these eight men was 52.3 in a bimodal distribution peaking at 20 and 90 arrests. It seems plausible, therefore, that the criminal population may be divided into at least two, and perhaps three, groups based on the pattern of criminal behavior shown.

Several investigators have looked at subgroups of non-violent offenders. Lester's (1975) look at firesetters supports the above hypothesis that property offenders usually maintain a consistent pattern of property crimes. Guze (1976) stated that check offenders (worthless checks, forgery, etc.) appeared to form a distinct subgroup in that they were usually white, older and more educated than the general criminal population. They also showed an increased prevalence of alcoholism and higher recidivism rates. Crockett (1971) reports drug offenders as a potentially distinct subgroup. He notes that these individuals are more likely to show neurotic tendencies, particularly depression, anxiety and hypochondriasis, than to appear psychopathic or hedonistic. They also tend to be more withdrawn, intrapunative, and suspicious than non-drug offenders.

While non-violent offenders have drawn the attention of some investigators, the vast majority of the criminal subgroup research has focused on the violent individual. A large number of characteristics and life history variables have been associated with violent behavior: deficiencies in verbal and other social skills; proneness to action rather than psychic-delay mechanisms such as thought, words or symbols; irritability and low frustration tolerance; and limited or superficial relations with significant others (Bychowsky, 1967; Kozol et al.,1972; Menninger and Modlin, 1971; Toch, 1969). Interpersonal orientations in which the individual sees others as tools to serve his needs or perceives himself as subject to others' manipulations are seen by Toch (1969) as likely to produce violence. Histories which have included prior assaults, homicides, suicide attempts and episodes of altered states of consciousness have also been highlighted in dangerous persons (Corney, 1970; Menninger and Modlin, 1971). Hellman and Blackman (1966) successfully correlated enuresis, firesetting and cruelty to animals during childhood with aggressive criminal behavior; however, Corney (1970) noted that carefully controlled attempts to replicate this finding have been unsuccessful. Kinzel (1971) found that the body buffer zones of violent prisoners were four times larger and differently shaped than those of non-violent prisoners. In adults, Stone (1976) reported that alcohol and drug abuse, feelings of helplessness and being trapped, and an early history including parental brutality were frequent correlates of violent behavior. Malmquist's (1971) study of 20 juveniles accused of homicide added hypochondriasis, repeated object losses and "threats to manhood" to Stone's correlates (p. 463).

Examinations of Non-criminal, Violent Populations

In addition to the above studies of criminal populations, several investigators have examined non-criminal groups. Climent and Ervin (1972) compared 40 emergency room patients presenting for treatment of violent behavior with matched controls. They found no differences between the groups on childhood behaviors such as enuresis, pyromania, cruelty to animals, hyperactivity and stealing. However, the patient group more frequently reported childhood temper tantrums, emotional deprivation, physical assaults by parents, head injuries with unconsciousness, convulsions, and suicide attempts.

Based on the idea that "the thought is father to the deed," assaultive and homicidal ideations have also been examined. Altman, Sletter, Eaton and Ulett (1971) identified patients with thoughts in these areas and determined the Mental Status Examination items and demographic factors which were significantly correlated with them. As would be expected, thoughts of assault and homicidal ideations were significantly correlated with each other and overlapped in several other mutually correlating factors: Hostility, Impulsive Acts, Delusions of Persecution, Excessive Speech, and Obsessional Ideas. They differed, however, on half of their correlating factors. Thoughts of assault were additionally related to other Antisocial Tendencies, Delusions of Reference, Labile Affect and Thoughts of Eloping. Homicidal Ideations were correlated with Suicidal Thoughts, Illusions, Diagnosis of Paranoid Schizophrenia, Passivity, and Encapsulated Delusions. Unfortunately, while many of these correlations would appear to have a great deal of "face validity," they proved to be poor predictors in the authors' tests on additional patient groups.

MacDonald (1968) examined 100 patients admitted for psychiatric treatment following homicidal threats. He reported that 10% of these individuals had heard parents threaten to kill, 52% had made prior homicidal threats, and 2% had previously committed "justifiable homicide." Diagnostically, 48% were seen as psychotic with the remainder classified simply as non-psychotic. Noting that the incidence of homicide and suicide in these patients (3% and 4% respectively within five years) was significantly higher than in the general population, MacDonald argued that the threat to kill is an indication of increased likelihood to do so. While a threat is certainly not a prediction of violent behavior, it is not to be dismissed lightly.

The Psychological Assessment of Violent Populations

While the personality characteristics of violent individuals are generally consistent across the clinicians publishing their impressions, attempts to document these characteristics in a manner conducive to prediction have been relatively unsuccessful. The Minnesota Multiphasic Personality Inventory (MMPI) has been the instrument most widely employed in these attempts. Carroll and Fuller (1971) reported that the nine clinical scales of the MMPI did not discriminate groups convicted of violent and sexual crimes from a non-criminal, non-clinical "normal" group. More problematically, the group of men convicted of non-violent crimes appeared in their study to be significantly more hostile, confused, and "deviant" than any of the other groups. It appears from these results that strict use of the MMPI clinical scales may result in the improper classification of historically non-violent individuals, marking them as potentially dangerous.

Other investigators have, however, been somewhat more successful in their use of the MMPI. Comparing consistently violent criminals (more than three arrests for assaultive crimes) with consistently non-violent criminals (more than three arrests none of which was assaultive), Waldron (1976) found significant differences in the MMPI clinical and Mayo scales. The consistently violent group showed higher scores on the Psychopathic Deviancy (Pd) and Paranoia (Pa) subscales, and lower scores on Psychiatric Control and Depression. Hathaway and Monachesi (1953) found similar differences in delinquent and non-delinquent adolescent groups. The delinquents received higher Pd and Pa scores, and showed higher L and F validity scales than the non-delinquents. Panton (1962) used the MMPI scales to compare habitual and non-habitual offenders. He reported significant differences on the Pd and Mania subscales, with habitual criminals scoring higher on both.

MMPI subscale configurations have also been successfully used in describing violent individuals. Persons and Mark (1971) noted that 4-2, 4-9, 4-8 and 4-3 were the four most frequently occurring two-point codes found in the population of a maximum security prison. In comparing the individuals whose MMPI high points were defined by these codes, they found that only the 4-3 pattern showed a significantly higher rate of violent crimes. None of the other groups differed from the institutional base rate. Davis and Sines (1971) reported similar results with the 4-3 configuration. They found this profile occurring in university medical center, prison, and state hospital patients with cyclic patterns of acute emotional and behavioral disturbance minimally related to external stress. In his comparison of violent and non-violent offenders, Clark (1978) reported notably different findings. Looking at one-, two- and three-point codes, he found 4, 4-8-9, 2-7-8 and 4-9 to be the most commonly occurring configurations. Clark noted that 2-7-8 and 4-8-9 codes occurred at a much higher frequency in violent than in non-violent offender groups and emphasized scale 8 elevations as a correlate of violent crimes.

Most of the research on violent or dangerous behavior has not, however, utilized the MMPI clinical scales. A multitude of hostility or aggression subscales have emerged, most of which appear to have very little validity. Deiker (1974) stated that when testing 17 such experimental subscales, 13 were found to predict opposite to the behavioral indicators of dangerousness. Megargee and Mendelsohn (1962) and Shipman (1965) reported similar experiences in their attempts to validate these scales. Megargee and Mendelsohn (1962) found, however, that those scales showing the most predictive potential were those which measured overcontrol or inhibition of aggression. Megargee (1966) hypothesized that aggressive individuals may fall into two categories: undercontrolled and overcontrolled. The undercontrolled aggressor has generally low inhibitions against aggression and usually responds to frustration or provocation with violent behavior. The overcontrolled individual may rarely respond with aggression due to his strong generalized inhibitions. He is, however, in a state of conflict between strong aggressive impulses and rigid constraints prohibiting expression of them. As a result, he only aggresses when these controls have been stressed over a long period of time. At this point, he is likely to indulge in extreme, explosive violence. This description of the overcontrolled individual is consistent with Tanay's (1972) discussion of ego-dystonic homicides by overcontrolled individuals and Chandler's (1978) portrayal of violent acts by passive, submissive, introverted, ectomorphic offenders.

Megargee, Cook and Mendelsohn (1967) developed this hypothesis into the Overcontrol-Hostility scale. Based on 31 MMPI items, the scale was found to successfully differentiate between extremely assaultive individuals diagnosed clinically to be over- and under-controlled. Deiker (1974) supported further the validity of this scale noting that it appropriately predicted increasing aggression across groups of criminals convicted of non-violent crimes, battery, life-threatening crimes and homicide. Deiker suggested, however, that the scale's apparent validity may be the result of negative response bias. In 1975, Megargee and Cook developed a version of the Overcontrol-Hostility scale, balancing true and false keyed items. The authors reported that this scale differentiated among the criminal groups more effectively than the original. In contrast, Mallory and Walker (1972), Hoppe and Singer (1977), and Clark (1978), were unable to find significant differences in the Overcontrol-Hostility scores of assaultive and non-assaultive criminals. It seems apparent that even this, the most promising of the MMPI aggression scales, does not provide a consistently accurate correlate to dangerous behavior. But as Megargee (1970) noted, this scale may prove helpful in identifying an overcontrolled subgroup of violent individuals, a group which presents greater diagnostic difficulty than undercontrolled, overtly aggressive persons.

The Wechsler Adult Intelligence Scale (WAIS) has also been examined for possible correlation to dangerous behavior. Deiker (1973) found that the mean full-scale IQ score of 243 convicted murderers was significantly lower (96.2) than that of the general population. He noted, however, that this may be due to factors other than aggression. It would seem that a difference of this magnitude, although statistically significant, provides little insight into the dynamics of agression and is of little predictive utility in assessing the potential for violence.

After factor analyzing the WAIS scores of 30 individuals on a maximum security ward for the criminally insane, Kunce, Ryan and Eckelman (1976) found that the ratio of the Similarities subscore times 100 to the sum of all eleven subscale scores was significantly different in the groups of violent and non-violent patients. They suggested the "poor facility in abstract capabilities may indicate an inability on the part of the ideational processes to act as a buffer against impulsive action" (Kunce et al., 1976, p. 44). This hypothesis is similar to the poor verbal mediation of frustration postulated by Glueck and Glueck (1960, 1962, 1970) when they reported low verbal intelligence in juvenile delinquents.

Clearly the MMPI and WAIS are the psychological measures most frequently utilized to study violent behavior. Rosenzweig's Picture Frustration test has, however, also been used--with conflicting results. As noted earlier, Peterson et al. (1962) reported more extrapunitive responses (attempts to overcome frustration by aggressive activity) in consistently violent criminals than in consistently non-violent ones. Kaswan, Wasman and Freedman (1960) found no difference in response to categories with the type of criminal offense. Okasha, Sadek and Moneim (1975) stated that results of the Hand Test and Thematic Apperception Test (TAT) showed differences among hospitalized murderers, incarcerated murderers and "normals." They noted that the TAT stories of incarcerated murderers generally reflected themes of crime and aggression, paranoid fears, aggression toward females and homosexual tendencies. The themes of murderers hospitalized in psychiatric settings were less criminal in content and more disturbed. Powitzky (1976) examined Loevinger's concept of ego-development as measured by the Washington University Sentence Completion

Test in groups of offenders. He found significantly increasing levels of ego development in sex offenders, armed robbers, drug offenders, embezzlers and conscientious objectors. While the author stated that these results may prove useful in enhancing psychological-criminological theories, the possibility of influences due to education, social status, and intelligence seemed apparent in this pattern of results.

Biomedical Approaches to Violent Behavior

Dating from the practice of phrenology, the biomedical approach to crime appears firmly based in tradition--but tenuously grounded on empirical data (Nassi and Abramowitz, 1976). The well-publicized "criminal tendencies" of XYY male provides an excellent example of the methodological difficulties encountered in these studies. Witkin (1976) reports that there are no significant differences between XYY and XY males in the percent of convictions for violent crimes. In fact, as Bandura (1973) notes, even in the original population surveyed, 88% of the crimes committed by the XYY's were property crimes. When suitably matched with XY controls (taller, lower intelligence), these XYY prisoners actually show a lower incidence of physical and sexual assaults. Witkin attributes the higher mean rate of criminal convictions seen in these individuals to the increased likelihood that people with lower intelligence get caught and convicted.

Recently, more viable biomedical hypotheses have been proposed linking violent behavior with temporal lobe or limbic disease (Mark and Ervin, 1970; Solomon and Kleeman, 1971; Bach-y-Rita, Lion, Climent, and Ervin, 1971;

Kunce et al., 1976). Mark and Ervin delineate a dyscontrol syndrome characterized by a history of physical assaultiveness, pathological intoxication, impulsive sexuality and repeated traffic-violations and accidents, which they believe is related to limbic disease. Their supporting research, predominantly brain stimulation studies, has been sharply criticized by Valenstein (1973). He points out that electrodes implanted in many areas of the brain can elicit the same behavior by stimulating a neural system which ranges over large areas of the brain. Consequently, stimulation or ablation of an area with resulting behavior change does not necessarily implicate that region as the neural site of that response.

Gross (1972) hypothesizes that an organic brain disease similar to temporal lobe epilepsy may be related to violent behavior. Pointing out that alcohol may facilitate a temporal epileptoid state, he reports temporal lobe dysrhythmia catalyzed by alcohol in persons with normal electroencephalograms. As these individuals frequently showed violent, uncontrolled behaviors, he suggests that an organic brain condition resulting in dysrhythmia and behavioral dyscontrol under minimal stimulation may be correlated with violence.

As a result of their study of 130 explosively violent patients, Bach-y-Rita et al. (1971) have stated that violence is not a symptom which is solely psychological, biological or sociological in origin. Rather, they feel, it is a product of the interplay of all three factors. While they found evidence of childhood hyperactivity, EEG abnormalities, seizure disorders and temporal lobe epilepsy in their violent population, they also found high incidences of childhood deprivation, disruption of the nuclear family, and violent, alcoholic or psychotic parents. The equally apparent correlations of these factors and the physiological evidence necessitated a broader approach to the concept of violence.

The Methodological Problems in the Current Literature

It is obvious from the above discussion that the mental health professional in his role as consultant to the legal system is faced with difficult questions concerning dangerousness and little consistent data from which he may answer them. Furthermore, few guidelines exist which would assist individuals in the criminal justice field in making their classification, sentencing and parole decisions. Holland and Holt (1976) have critically noted that these decisions cannot currently be accounted for by offender characteristics (MMPI or WAIS). However, until some reliable method of identifying dangerous individuals is developed, the needs of both the mental health and criminal justice systems described earlier by Schlesinger (1978) and Rector (1973) will go unmet.

Since there is general consistency among clinicians as to the characteristics of violent individuals, the inconsistencies and contradictions within the empirical research require some explanation. In addition to the inherent complexities involved in predicting dangerousness, there are a number of contributing methodological problems. First, the populations used by investigators are not consistent. Some have used hospitalized offenders (Hoppe and Singer, 1977; Kunce et al., 1976); others, incarcerated offenders (Peterson et al., 1962; Persons and Mark, 1971; Carroll and Fuller, 1971; Deiker, 1973, 1974; Felthous and Yudowitz, 1977); and still others, patients presenting themselves for treatment of violent outbursts (Shipman, 1965; MacDonald, 1968; Bach-y-Rita et al., 1971; Altman et. al., 1971). As the decision to place an individual in a psychiatric versus criminal setting is carefully made on specified criteria, a selection procedure is in operation. There is no reason to presume, therefore, that these populations should show similar psychological characteristics. In fact, there is every reason to assume that offenders who have been hospitalized are significantly different from those who have been incarcerated on precisely these psychological characteristics. Second, most studies comparing violent and non-violent offenders draw their subject populations from the same institution, usually a maximum security prison. As there is a classification process within the prison system, there is likely to be some level of gross homogeneity within that institutional population. In particular, "non-violent" offenders placed in maximum security institutions may be poor representatives of this class of offenders. Their placement may well be a reflection of violent behavior within a previous institution. Third, the use of offenders from penal institutions to compare violent and non-violent offenders allows no control for the effects of the institution. As prisons are well-known for the violence of their subculcure, mere incarceration may have affected these individuals, eroding any differences between the violent and non-violent members. Four, the extensive use of plea bargaining may result in an individual's conviction and incarceration for a lesser charge which is poorly representative of his actual behavior. For example, an individual initially charged with aggravated battery may eventually be convicted of disorderly intoxication. Statistically he would then appear as having committed a minor alcohol offense rather than a violent crime. All studies to date have classified offenders on the basis of the convicted crime. Plea bargaining may therefore be contributing to misclassification and the contamination of "non-violent" groups with individuals who have exhibited violent behavior. Wenk et al. (1972) noted that some unavoidable contamination may already be present due to the commission of unreported violent acts by "non-violent" offenders. Consequently, it is extremely important that the available data be as reliable and accurate as possible.

The following study was designed to eliminate potential biases due to institutional classification and placement by sampling subjects at a local correctional facility. This further limited influences due to a prison environment. It was hoped that by viewing a heterogeneous criminal population shortly after the criminal behavior had occurred, significant differences in demographic, historical and psychological characteristics could be demonstrated between violent and non-violent offender groups. Due to the fact that data were gathered throughout the judicial proceedings leading to conviction, the initial charge as well as the charge on which the individual was subsequently convicted were recorded. This permitted a comparison of the validity of derived discriminating variables based on both methods of classification into violent and non-violent categories.

Hypotheses

In examining the relationships between demographic, historical and psychological variables and the commission of violent and non-violent crimes, the following hypotheses were proposed.

1. No significant differences will be found between the demographic characteristics of violent and non-violent offender groups.
2. No significant differences will be found in their "family history" characteristics (birth order, number of siblings, parents' occupation).
3. No significant differences will be seen between these groups in the incidence of drug or alcohol abuse.
4. No significant differences will be noted in the incidence of prior drug, alcohol or mental health treatment.
5. No significant differences will be seen in the psychiatric diagnoses of violent and non-violent group members.
6. No differences will be found between groups in the incidence of prior convictions for violent or non-violent crimes or in the number of months of county and state time previously served.
7. No significant differences between groups will be shown by any item on the mental status exam.
8. While the classifications (violent and non-violent) based upon the original charge and the "convicted" charge will be significantly related, a shift from violent initial charges

to non-violent convictions will be noted.

9. Personality characteristics, as determined by psychological testing, will provide significant discriminations between violent and non-violent groups.
10. Differences will be seen in the predictive validity of psychological functions when those functions derived from initial charge classifications are compared with functions derived from "convicted" charge classifications.

CHAPTER THREE

METHODS

Subjects

The subject population for this study was composed of 776 individuals arrested and processed through the criminal justice system in Alachua County, Florida, between August 1, 1977, and July 31, 1978. These cases were handled by the Alachua County Court and by the Eighth Judicial Circuit Court of Florida. Those individuals who were found "not guilty" or whose charges were *nolle prossed* (dropped) were not included in the 776 subjects.

An additional group of 26 subjects processed through the same criminal justice system between August 1, 1978, and June 1, 1979, were used to test the validity of the derived predictors of dangerousness.

Materials

Two structured interviews were used to obtain demographic and life history data. The text of data collection forms used during these interviews may be found in Appendices A and B. The First Appearance Interview recorded basic personal and legal data: date of birth, sex, race, marital status, years of education, occupation and employment status, current criminal charge, prior convictions and sentences, and the number of months previously served in county or state institutions. It also noted drug or alcohol abuse and previous treatment for drug, alcohol or mental health problems.

The second structured interview, the Intake Interview, was designed to gather additional life history data (parents' occupation, birth order, number of siblings), to codify the interviewer's observations of the subject through use of a mental status exam (Johnson, Snibbe and Evans, 1975), and to allow a second screening of the subject for drug, alcohol and mental health problems.

Psychological assessment procedures employed the Minnesota Multiphasic Personality Inventory - Form R (University of Michigan, 1970), the Rorschach Test (Rorschach, 1921), and the Wechsler Adult Intelligence Scale (Wechsler, 1955). The Minnesota Multiphasic Personality Inventory (MMPI), a widely used objective psychological test, is composed of 504 items covering many personality traits, social behaviors, and subjective experiences. The subject indicates whether each item is mostly true or mostly untrue of him. His responses are then compared to those of patients from known diagnostic groups, yielding his scores on the clinical subscales. Additional subscales provide indications of the subject's social adjustment and identification with prescribed sex roles as well as information regarding the validity of the other subscale scores. K-corrected MMPI subscale scores were utilized in this study.

The Rorschach Test, a projective psychological test, presents the subject with relatively ambiguous stimuli and requires him to organize it into some meaningful perception. His responses are then scored according to their location, determinants and objective accuracy. In this study, the Rorschach determinants and locations were scored according to the procedures outlined by Klopfer, Ainsworth, Klopfer and Holt

(1954). Form level was scored as outlined by Beck (1949). The main determinants, extended form level, number of responses, number of cards rejected and average latency in seconds were recorded.

The Wechsler Adult Intelligence Scale (WAIS) is composed of 11 subtests: Information, Comprehension, Arithmetic, Similarities, Digit Span, Vocabulary, Digit Symbol, Picture Completion, Block Design, Picture Arrangement and Object Assembly, The first six subtests are used to derive the Verbal Intelligence Quotient (I.Q.); the last five subtests determine the Performance I.Q. Full-Scale I.Q. scores are obtained from the sum of all of the scaled subtest scores. This study utilized all scaled subtest scores in addition to Verbal, Performance and Full-Scale I.Q. scores.

Procedure

By Florida law an individual must appear in court within 24 hours of the time of his arrest. At this time he is formally read the charges against him, legal counsel is appointed and a bond is set. Prior to this daily hearing, the First Appearance Interview was conducted by one of two bachelor's-level criminal justice counselors. In addition to collecting the required data, these individuals were specifically trained to detect evidence of drug, alcohol and mental health problems. The data gathered were verified following the interview through contacts with family, friends, employers, and the Alachua County Sheriff's Department. If the subject was released on a recognizance or cash bond within three days of his arrest, no further data, except for his case disposition, were collected. This rapid release occurred in 538 subjects.

If the subject remained incarcerated in the Alachua County Corrections Center (ACCC) for three days after the First Appearance hearing, the Intake Interview, including the mental status exam, was performed by a master's-level classifications counselor. These counselors had previously received specialized training, conducted by the staff psychiatrist, in the administration of the mental status exam.

After adjudication of guilt, but prior to sentencing, the MMPI, WAIS, and Rorschach were administered to those 39 subjects receiving a court-ordered pre-sentence investigation. The assessments were conducted by one of two doctoral students in clinical psychology. These students had received a minimum of two years of graduate training, including at least one year of supervised clinical work.

Case dispositions and sentences were obtained from the Misdemeanor, Felony and Traffic Divisions of the Alachua County Court House. Psychiatric diagnoses were recorded on those subjects referred by themselves or by an ACCC staff member to the staff psychiatrist. These diagnoses were coded according to the guidelines stated in the Diagnostic and Statistical Manual of Mental Disorders, Second Edition (American Psychiatric Association, 1968). Occupations were coded as unemployed, unskilled, skilled, clerical, professional or student.

In classifying charges and prior convictions into violent and nonviolent types, the following charges were defined as violent: assault, battery, spouse battery, aggravated assault, aggravated battery, resisting arrest with violence, robbery, armed robbery, manslaughter, attempted murder, murder, kidnapping, lewd and lascivious assault, sexual battery and child molesting. All other charges were designated as non-violent. In cases with multiple charges including both violent and non-violent crimes, the violent category was used. Each case was classified as violent or non-violent twice: the first time based on the "initial" charge described at the time of arrest and the second time based on the "convicted" charge, the crime of which the subject was eventually convicted. When categorized on the basis of initial charge, 695 non-violent and 81 violent offenders were defined. When the convicted charge was used in the classification process, 736 non-violent and 40 violent offenders were described.

Analysis

Demographic and historical variables, as well as the items of the mental status exam, were examined for systematic relationships with the subject's initial charge classification using chi-square and t-test measures of statistical significance. Stepwise discriminant function analyses were performed on the MMPI, WAIS and Rorschach data to determine those factors differentiating violent from non-violent offenders and to assess the predictive validity of the determined factors. This analytic procedure was selected due to the promising results shown in its relatively recent application in violence research (Glueck, 1974; Shagoury, 1972; Waldron, 1976). Psychological test data were subjected to discriminant function analysis twice to provide a comparison of their predictive potential based upon both initial and convicted charge classifications. The derived predictive equations where then used to classify the group of 26 subjects not included in previous analyses. These predicted classifications were compared to the subjects' actual classifications based on both initial and convicted charge.

CHAPTER FOUR

RESULTS

Demographic, Historical and Mental Status Characteristics of Violent and Non-Violent Offenders

Hypotheses one and two were supported by this study. No significant differences were noted between violent (V) and non-violent (NV) offenders when the following demographic and family history characteristics were examined: sex, age, race, marital status, occupation, years of education, parents' occupation, birth order, and number of children in the family. Details of these and all non-significant analyses of life history variables may be found in Appendix C. As analyses indicated no significant differences between V and NV offenders in the incidence of drug or alcohol abuse or in prior treatment for drug, alcohol or mental health problems, hypotheses three and four were also supported.

Hypothesis five, postulating no differences in the psychiatric diagnoses of V and NV offenders, was rejected. As shown in Table 1, depressive neurosis, transient situational disturbance, and non-psychotic organic brain syndrome with alcohol intoxication were found more frequently in V than in NV offenders. Schizophrenia, affective and reactive psychoses, antisocial and inadequate presonality disorders and alcoholism occurred almost exclusively in non-violent offenders.

When the criminal histories of V and NV offenders were analyzed, no significant differences were noted. Previous convictions for V and NV crimes, and the absence of any prior convictions appear similarly in both groups. Furthermore, V and NV offenders showed no differences in the

Table 1

Initial Charge Classification and Psychiatric Diagnosis

Diagnosis	Initial Charge Non-Violent	Violent
Schizophrenia	15	3
Affective Psychosis	4	0
Reactive Psychosis	2	0
Depressive Neurosis	2	5
Paranoid Personality	2	1
Antisocial Personality	9	0
Inadequate Personality	2	0
Alcoholism	16	0
Transient Situational Disturbance	0	1
Non-psychotic Organic Brain Syndrome with Alcohol Intoxication	0	1

$\chi^2 = 31.114$ $N = 63$ $df = 9$ $p < .01$

incidence of previous incarcerations or in the number of months served in county or in state correctional facilities. Hypothesis six was therefore supported.

Significant differences were encountered in the mental status exams of V and NV offenders. Hypothesis seven was consequently rejected. As indicated on Table 2, V offenders were rated more frequently than NV offenders as appearing slightly or markedly depressed. Their variability of facial expression and their body movements were more frequently seen as decreased. While there was no difference in the relative percentage of V and NV offenders perceived as severely impaired intellectually, V offenders were more often rated as having slight intellectual impairments. Non-significant analyses of mental status items are detailed in Appendix D.

Table 3 shows the comparison of the subjects' initial charge and the charge on which they were convicted. As postulated in hypotheses 8,

Table 2

Initial Charge Classification and Mental Status Exam Items

Item 9: Facial expressions of depression or sadness

Item rating	Initial Charge Non-Violent	Violent
Not Present	150	24
Slight	28	15
Marked	1	4
History	0	0

$\chi^2 = 21.860$ N = 222 df = 2 $p < .01$

Item 11: Decreased variability of expression

Item rating	Initial Charge Non-Violent	Violent
Not Present	160	23
Slight	19	9
Marked	0	1
History	0	0

$\chi^2 = 7.725$ N = 22 df = 2 $p < .05$

Item 14: Decreased or slowed body movements

Item rating	Initial Charge Non-Violent	Violent
Not Present	170	35
Slight	9	7
Marked	0	0
History	0	0

$\chi^2 = 5.238$ N = 221 df = 1 $p < .05$

Item 40: Impaired intelligence

Item Rating	Initial Charge Non-Violent	Violent
Not Present	153	33
Slight	16	10
Marked	4	1
History	0	0

$\chi^2 = 6.058$ N = 217 df = 2 $p < .05$

these charges were significantly related. However, one-half of those 81 subjects originally charged with a V crime were convicted of an NV crime. None of the 695 offenders initially charged with NV crimes were convicted of V crimes. Consistent with hypothesis 8, a shift from V initial charges to NV convictions was noted. The reverse shift from NV initial charges to V convictions was totally absent.

Table 3

Initial Charge and Convicted Charge Classifications

	Initial Charge	
Convicted Charge	Non-Violent	Violent
Non-Violent	695	41
Violent	0	40

$\chi^2 = 351.832$ N = 776 df = 1 $p < .01$

Discriminant Function Analyses of Psychological Characteristics

The interpretation of discriminant function analyses was approached in a conservative manner. Wilks' lambda, providing an inverse measure of the discriminating power of the variables, was first examined. This measure was converted to a chi-square statistic, comparing the distribution of function scores to a random distribution. All analyses derived in this study resulted in Wilks' lambdas which were significant at the .05 level. Consequently the separations of group means provided by these functions are unlikely to be the chance result of sampling error.

The canonical correlations of the discriminant functions were then reviewed. Similar to a correlation ratio, the canonical correlation squared indicated the percentage of the total variance of the function attributable to group differences. Discriminant functions which had a canonical correlation of at least .71 were considered "highly significant" as 50% of the function's variance was ascribed to group differences. In the same manner, canonical correlations of .57 to .70 were considered "significant." Functions whose canonical correlations were less than .57 were viewed as non-significant because less than one-third of their total variance was attributable to differences between the groups.

Using these strict guidelines, the two discriminant function analyses performed on data from each of the three psychological tests were examined. In the first analysis of each test, the V and NV groups were defined by the subjects' initial charge. In the second analysis, groups were classified by the subjects' convicted charge. Interpretations of the component variables of these functions followed the limitations stated by Tatsuoka (1970). Only those variables whose weights (absolute value) were at least one-half of the largest weight were considered in the discussion (Tatsuoka, 1970, p. 4). This limitation assured that each variable interpreted had the same relative importance (weight) within the function.

Analyses of Psychological Data Using Initial Charge Groups

As indicated in Table 4, discriminant function analysis of the WAIS variables grouped by initial charge resulted in a significant discrimination. Wilks' lambda, converted to a chi-square statistic, showed a significance of .006. The canonical correlation was .597, indicating that a significant proportion of the function's variance was explained by group differences. Tatsuoka's criterion was used for interpreting variable weights (standard-

Table 4

Discriminant Function Analysis of WAIS Data
Grouped by Initial Charge Classification

Canonical Correlation	Wilks' lambda	Chi-square	df	Significance
0.597	0.643	14.562	4	0.006

Standardized Discriminant Function Coefficients

WAIS Variable	Coefficient
Comprehension	-0.674
Digit Span	-0.782
Vocabulary	0.593
Performance I.Q.	1.089

Centroids of Initial Charge Groups
(Mean function scores)

Non-Violent	-0.285
Violent	1.220

Classification Function Coefficients

	Coefficients	
WAIS Variable	Non-Violent	Violent
Comprehension	-3.444	-3.889
Digit Span	-0.369	-1.012
Vocabulary	0.454	0.923
Performance I.Q.	1.466	1.665
Constant	-52.993	-67.042

Prediction Results with Original Data

	Predicted Group	
Initial Charge Group	Non-Violent	Violent
Non-Violent	25	5
Violent	1	6

N = 37 Percentage of cases correctly classified: 83.78%

ized discriminant function coefficients). The Vocabulary subtest score and Performance I.Q. contributed heavily to this function in the positive direction. The Comprehension and Digit Span subtest scores were heavily weighted in the negative direction. Examining the group centroids (mean function scores), it was apparent that the function scores of V offenders were higher than those of NV offenders. This suggested that the V offenders scored higher on Performance I.Q. and Vocabulary, but lower on Comprehension and Digit Span than the NV offenders. Classification function equations were next used to predict the subjects' group membership. Correct assignment to V and NV groups resulted in 84% of the cases.

A significant discriminant function, detailed in Table 5, also resulted from the analysis of MMPI data. Using the same procedures as described above, Hysteria (Hy) and Social Introversion (Si) were found to contribute positively to this function while Hypochondriasis (Hs) contributed negatively. Group centroids again noted the V offender as achieving higher function scores than the NV group. Violent offenders were therefore conceptualized as having higher Si and Hy subscales and lower Hs subscales than NV offenders. Predicted classifications into V or NV groups were accurate in 87% of the cases.

Analysis of the Rorschach variables resulted in a highly significant discriminant function as shown in Table 6. Although 12 variables contributed to this function, only two were heavily weighted: D and Dd location scores. Violent offenders used Dd locations more frequently than NV offenders. The V and NV group memberships predicted by this function were

Table 5

Discriminant Function Analysis of MMPI Data
Grouped by Initial Charge Classification

Canonical Correlation	Wilks' lambda	Chi-square	df	Significance
0.692	0.521	16.604	7	0.020

Standardized Discriminant Function Coefficients

MMPI Variable	Coefficient
F	0.420
K	0.682
Hypochondriasis (Hs)	-1.872
Hysteria (Hy)	2.130
Paranoia (Pa)	-0.491
Psychoasthenia (Pt)	-0.641
Social Introversion (Si)	1.278

Centroids of Initial Charge Groups
(Mean function scores)

Non-Violent	-0.378
Violent	1.260

Classification Function Coefficients

	Coefficients	
MMPI Variable	Non-Violent	Violent
F	0.204	0.419
K	4.703	5.154
Hypochondriasis (Hs)	-3.632	-4.502
Hysteria (Hy)	2.944	3.792
Paranoia (Pa)	1.059	0.730
Psychoasthenia (Pt)	-0.097	-0.376
Social Introversion (Si)	2.234	2.698
Constant	-75.962	-93.358

Prediction Results with Original Data

	Predicted Group	
Initial Charge Group	Non-Violent	Violent
Non-Violent	20	4
Violent	0	7

N = 31 Percentage of cases correctly classified: 87.10%

Table 6

Discriminant Function Analysis of Rorschach Data Grouped by Initial Charge Classification

Canonical Correlation	Wilks' lambda	Chi-square	df	Significance
0.849	0.279	26.801	12	.008

Standardized Discriminant Function Coefficients

Rorschach Variable	Coefficient
D	1.430
d	0.180
Dd	-1.083
FM	0.667
k	-0.350
K	0.301
c	0.308
FC	-0.460
CF	-0.550
C	0.293
F+%	-0.555
Number of cards rejected	0.372

Centroids of Initial Charge Groups (Mean function scores)

Non-Violent	0.471
Violent	-1.479

Classification Function Coefficients

	Coefficients	
Rorschach Variable	Non-Violent	Violent
D	0.192	-1.826
d	-7.881	-10.846
Dd	1.170	3.595
FM	-1.227	-2.504
k	-5.841	6.873
K	-6.356	-10.486
c	1.374	-5.330
FC	-0.113	3.880
CF	7.440	12.471
C	-4.573	-9.045
F+%	0.811	1.121
Number of cards rejected	-0.394	-2.290
Constant	-29.476	-42.288

Prediction Results with Original Data

	Predicted Group	
Initial Charge Group	Non-Violent	Violent
Non-Violent	22	0
Violent	0	7

N = 29 Percentage of cases correctly classified: 100%

consistent with the actual initial charge group in 100% of the cases.

Analyses of Psychological Data Using Convicted Charge Groups

The discriminant function analysis of WAIS data grouped by convicted charge classifications produced a non-significant function. As the derived canonical correlation was less than .57, the results were not interpreted. Details of this analysis may be found in Appendix E.

Using groups defined by convicted charge, the MMPI significantly discriminated between V and NV offenders as indicated in Table 7. The Hy and Si subscales contributed positively to the function while the Hs subscale was negatively weighted. Group centroids indicated that V offenders obtained higher function scores that NV offenders. Therefore, V offenders were differentiated from NV subjects on the basis of higher Hy and Si subscales and lower Hs subscales. This function correctly predicted the subject's convicted group membership in 90% of the cases.

Outlined in Table 8, the Rorschach data also provided significant discrimination between V and NV offenders. In this function, the number of responses given was heavily weighted in the positive direction with the number of D responses heavily weighted in the negative direction. Violent offenders gave more responses and utilized D location less frequently than NV offenders. The V and NV group classifications predicated by this Rorschach-derived function proved accurate in 79% of the cases.

Hypotheses Related to Analyses of Psychological Variables

Hypotheses nine, postulating that psychological characteristics would significantly discriminate between V and NV offenders, was supported.

Table 7

Discriminant Function Analysis of MMPI Data
Grouped by Convicted Charge Classification

Canonical Correlation	Wilks' lambda	Chi-square	df	Significance
0.659	0.566	14.812	6	0.022

Standardized Discriminant Function Coefficients

MMPI Variable	Coefficient
L	-0.387
K	0.758
Hypochondriasis (Hs)	-1.819
Hysteria (Hy)	1.886
Psychoasthenia (Pt)	-0.789
Social Introversion (Si)	1.257

Centroids of Convicted Charge Groups
(Mean function scores)

Non-Violent	-0.318
Violent	1.323

Classification Function Coefficients

	Coefficients	
MMPI Variable	Non-Violent	Violent
L	1.849	1.367
K	3.790	4.257
Hypochondriasis (Hs)	-3.475	-4.260
Hysteria (Hy)	2.692	3.390
Psychoasthenia (Pt)	0.556	0.237
Social Introversion (Si)	1.945	2.369
Constant	-71.061	-83.744

Prediction Results with Original Data

	Predicted Group	
Convicted Charge Group	Non-Violent	Violent
Non-Violent	22	3
Violent	0	6

N = 31 Percentage of cases correctly classified: 90.32%

Table 8

Discriminant Function Analysis of Rorschach Data Grouped by Convicted Charge Classification

Canonical Correlation	Wilks' lambda	Chi-square	df	Significance
0.616	0.621	11.919	4	0.018

Standardized Discriminant Function Coefficients

Rorschach Variable	Coefficient
Number of responses	0.829
D	-1.369
c	-0.411
C	0.353

Centroids of Convicted Charge Groups (Mean function scores)

Non-Violent	-0.309
Violent	1.185

Classification Function Coefficients

	Coefficients	
Rorschach Variable	Non-Violent	Violent
D	0.594	0.900
c	-0.343	-1.009
C	1.687	-1.392
Constant	0.187	2.043
	-3.248	-4.524

Prediction Results with Original Data

	Predicted Group	
Convicted Charge Group	Non-Violent	Violent
Non-Violent	19	4
Violent	2	4

N = 29 Percentage of cases correctly classified: 79.31%

As indicated in the discriminant function analyses discussed above, significant differences were demonstrated between V and NV offender groups. Hypothesis 10 suggested that differences in predictive validity would be found when those functions derived from initial charge classifications were compared with functions derived from convicted charge classifications. In addressing this hypothesis the two discriminant function analyses of each psychological test were compared.

The use of the initial charge categories was found to be obviously superior in the analyses of WAIS data as the convicted charge grouping yielded non-significant results. In comparing the analyses of the MMPI and Rorschach data, the canonical correlations were examined. The selection of this statistic for comparison was based on its measurement of the function variance attributable to differences between V and NV groups. Functions with a higher canonical correlation should provide better discriminations across samples than functions with low correlations. This is due to the decreased influence on the function of individual and other unattributed variance. Analyses of both Rorschach and MMPI data which were based on initial charge classifications resulted in higher canonical correlations than analyses based on convicted charge classes. The functions derived in these analysis were therefore interpreted as having greater predictive validity than those derived from convicted charge groupings. Hypothesis 10 was supported.

Discriminant Function Classification of an Independent Sample

In order to test further the validity of the significant discriminant functions, the classification equations of each function were applied to the test sample of 26 subjects. As shown in Appendix F, the accuracy of these predictions differed little from chance assignment to groups. The demographic characteristics of the test group were then compared to those of the sample used in the derivation of the discriminant functions. As detailed in Appendix G, the test group differed significantly from the original sample on six characteristics: years of education, incidence of initial charges and convictions for violent crimes, incidence of drug and alcohol abuse, and participation in outpatient mental health treatment. The two subject groups did not differ significantly in age, sex, race, occupation, marital status, criminal history, months of prior state or county time served, diagnosis or incidence of previous drug, alcohol or inpatient mental health treatment.

An Examination of Potential Biases Due to Rapid Release and Involvement in Court-Ordered Pre-Sentence Investigation

Due to their release on recognizance or cash bonds within three days of arrest, family history, mental status and psychological data were not obtained on 538 subjects. As shown in Appendix H, this "rapid release" group differed significantly from the group of subjects who remained incarcerated (the "incarcerated" group). Its members were more frequently white, employed and uninvolved in drug or alcohol abuse than the members of the incarcerated group. Their mean age and educational levels were higher. Furthermore, individuals in the rapid release group were more often arrested and convicted of non-violent offenses than individuals remaining incarcerated. Prior convictions and incarcerations were noted less frequently in these subjects. Consistent with this history, the rapid release group averaged less time previously served in state correctional facilities than the incarcerated group. Although the rapid release and incarcerated group members did not differ significantly in their diagnoses, rapid release members less frequently reported prior drug, alcohol or mental health treatment. No differences were noted between these groups in sex, marital status or amount of time previously served in local correctional facilities. None of these differences between the rapid release and incarcerated groups involved a characteristic found to be related directly to arrest for V or NV offenses. It is possible, however, that these differences are correlated with variations in family history, mental status and psychological variables. As data on these variables were gathered only from the incarcerated group, the results of these analyses may not be applicable to the rapid release group. The analyses of family history, mental status and psychological variables must therefore be acknowledged as based on incarcerated offenders only. These results should not be assumed to be descriptive of all V and NV offenders.

Psychological test data were obtained only on those 39 subjects undergoing a court-ordered pre-sentence investigation. These subjects were compared to the remainder of the incarcerated group for differences suggestive of selection biases. After examining the same demographic and life history variables used to contrast the rapid release and incarcerated groups, no significant differences were noted as shown in Appendix I. Consequently court-determined selection of these subjects was viewed as having little impact on the data. However, the possibility remains that the influence of an unidentified factor has resulted in a biased sample of psychological characteristics.

CHAPTER FIVE

DISCUSSION

Demographic, Historical and Mental Status Characteristics Of Violent Offenders

The lack of significant differences in the demographic and historical characteristics of violent and non-violent offenders reported in this study provides an initial indication of the complexities involved in discriminating between these groups. Clearly, the "obvious" and most easily determined characteristics of an individual offer little insight into his capacity for violent behavior. Furthermore, the absence of relationships to variables frequently associated with environmental influences (e.g., occupation, education), suggests that violent criminal behavior may be more closely related to individual characteristics than to environmental factors.

The lack of relationships between demographic or historical characteristics and the type of offense is of little help in differentiating between violent and non-violent groups. However, it does provide a perspective from which prior studies of offender populations may be reviewed. The consistency of violent or non-violent crimes in an individual's history reported by Peterson et al. (1962) was not supported by these results. Similar patterns indicating no criminal record, violent crimes and non-violent crimes were found in the histories of both violent and non-violent offenders. Criminal behavior patterns consequently appear to be even less "predicatable" than the previous literature indicates.

In contrast to the reports of Lindelius and Salum (1976) and Bach-y-Rita et al. (1971), alcohol abuse was not related to non-violent or violent criminal behavior. However, the diagnosis of alcoholism was seen exclusively in subjects arrested for non-violent crimes. While this relationship between diagnosis and alcoholism may be due to selection by self- or other-referral for psychiatric care, it may also indicate that alcohol influences violent and non-violent criminal behavior in two distinct ways. Lindelius and Salum's chronic alcoholics may be heavily represented among non-violent subjects with Bach-y-Rita et al.'s pattern of alcohol-catalyzed violent behavior represented by violent subjects. The presence of a dual influence of alcohol would be difficult to document as it may "average out" in V and NV group comparisons.

Psychiatric diagnoses and four mental status items were found to differ significantly between violent and non-violent groups. Consistent with Guze's (1976) remarks that sociopathy, alcoholism and drug dependence are associated with crime, sociopathy, alcoholism and schizophrenia were the most frequent diagnoses encountered in this study. It is probable that the high frequency of schizophrenia is an artifact of the referral process. These severely disturbed individuals are more likely to be identified and referred for psychiatric care than individuals whose disturbance is less apparent. Although these three diagnoses occurred the most frequently, they were seen primarily in non-violent individuals. Depressive neurosis, transient situation disturbance and non-psychotic organic brain syndrome with alcoholism were related to violent crimes.

Mental status observations reinforced the apparent relationship of depression to violent behavior by noting that consistent, sad facial expressions and decreased body movements were seen more frequently in violent individuals. Depression is often conceptualized as self-directed or "swallowed" anger (Redlich & Freedman, 1966, p. 543). Similarly, violent behavior may be seen as externally-directed anger. It is therefore possible that the relationship noted here between depression and violent behavior may be based upon the influence of an intervening variable which is related to anger. While depressive individuals may generally direct this anger inward, Megargee (1966) points out that environmental stress can disrupt rigid constraints against aggression resulting in violent behavior by usually overcontrolled individuals. Although this hypotheses offers some insight into the observed relationships between diagnosis and violent behavior, it is clear that further empirical study is needed. Prior studies of criminal behavior and diagnoses do not appear to generalize to specific considerations of violent individuals.

Psychological Characteristics and the Differentiation of Violent and Non-Violent Offenders

Discriminant function analyses of psychological data suggested 10 characteristics which may differentiate violent and non-violent offenders. Differences in the MMPI Hy, Si and Hs subscales of the two groups described violent offenders as more socially isolated individuals than non-violent offenders. They appear responsive to environmental influences, handling stress through repression and denial. Somatization defenses are seen less frequently in this group than in non-violent offenders (Lachar, 1974). The contribution of the Hy subscale (scale three) noted here supports the relationship between the 4-3 MMPI configuration and violent crime noted by Persons and Mark (1971) and Davis and Sines (1971). The absence of scale four (Psychopathic Deviancy) from the differentiating scales determined in this study may be due to uniformly high elevations of scale four across both violent and non-violent offenders. Clark's (1978) hypothetical relationship between MMPI scale eight (Schizophrenia) and violent crimes was not reflected in these findings.

The WAIS was found to differentiate violent from non-violent offenders on the basis of higher Vocabulary and Performance I.Q. scores and lower Comprehension and Digit Span scores. As the subscale most highly correlated with Full-Scale I.Q. (0.86), the Vocabulary subtest provides an excellent measure of the subject's general intelligence (Matarazzo, 1972, p. 218-219). This pattern of higher Vocabulary and Performance I.Q. scores was therefore interpreted as reflecting somewhat higher intelligence in violent offenders than in non-violent subjects. Descriptions of violent offenders portraying inadequate verbal skills (Kozol et al., 1972) and intellectual deficits (Deiker, 1973) were clearly challenged. The discriminant analysis further indicated that violent offenders obtained lower Comprehension and Digit Span scores than non-violent offenders. They were consequently conceptualized as having greater difficulty than non-violent individuals in making practical use of past experiences with their environment and in maintaining their focus of attention.

Analyses of the Rorschach data produced three factors related to the differences between violent and non-violent subject groups. Violent offenders were described by these factors as being more productive in the projective testing situation than non-violent offenders. They utilized Dd locations more frequently and D locations less frequently than their comparison group. As a result of this difference, violent individuals were seen as attending to smaller or more unusual characteristics of a stimulus than non-violent subjects. Following Klopfer et al. (1954), this use of location was additionally viewed as evidence of an "over-intellectualized approach with too little concern with the obvious, practical factors of experience" (p. 307).

The portrait of the violent offender painted by the differentiating psychological variables depicts an individual who is intelligent and verbal, but socially isolative. Although he is emotionally responsive to his environment, he is unconcerned with the practical aspects of it. Consequently he is poorly able to make use of his previous experiences and may use repression and denial to cope with repeated, unsatisfying situations. In viewing this description, it is important to recognize that it is based on the differences between violent and non-violent offenders. Other characteristics, common to both groups, may contribute heavily to the total personality picture.

Although these discriminant functions derived from psychological test data are useful in qualitatively describing differences between violent and non-violent offenders, their use as a general predictive tool is contraindicated for three reason. First, four of the five derived functions resulted in "false positive" classifications of 12-15% of the non-violent offenders analyzed. Significant numbers of non-violent individuals would therefore be incorrectly classed as violent. Second, the discriminating measures reported here were derived from a sample of incarcerated offenders. Selection biases were shown in the bond-attainment process resulting in differing rapid release and incarcerated groups. Application of these functions to non-offender groups or to offenders attaining bond shortly after arrest may be unjustified. Three, the derived functions showed poor generalization of their predictive utility. When tested on an independent sample, their rates of accurate predictions were indistinguishable from chance. This test group differed significantly from the original population and more accurate predictions may be expected with groups similar to the original sample. However, an effective predictive tool should not show the responsiveness to individual differences present in these functions.

Initial Charge: The Appropriate Indicator of Criminal Behavior Types

Undoubtedly the most significant result of this study is the documentation of the shift from violent initial charges to non-violent convictions. The vast majority of criminal convictions are currently obtained as the result of plea negotiations or "bargaining" (Shin, 1972; Church, 1976). Examining indictments for robbery and assault in New York county, Shin (1972) reports that 92% of these cases resulted in convictions on reduced charges and that 98% of these reduced convictions were due to plea bargains. The negotiated charge on which the individual is eventually convicted may poorly describe his original behavior, recorded in the initial charge. Fully one-half of the offenders initially charged with violent crimes were shown in this study to obtain convictions for non-violent crimes. None of the individuals arrested for non-violent crimes were convicted on violent charges. Furthermore, use of the initial charge was shown to provide better discrimination between violent and non-violent groups than use of the convicted charge. Based upon these results, it is maintained that the initial charge is the appropriate behavior-based measure to be used in defining violent and non-violent offender groups.

Implications

The results of this study certainly do not provide the classification techniques or empirical predictors of violent behavior sought by Glasner et al. (1974) and Rector (1973). Among both mental health and legal professionals, the need for accurate predictors of dangerousness still remains. However, these results do provide important guidelines for future research and insight into the inconsistencies of the previous literature. All of the prior studies of violent and non-violent offenders have used the convicted charge in their classifications of subjects. As the use of such definitions has been shown in this work to result in contaminated comparison groups, the conflicting results seen in the literature are not surprising.

The availability of initial charge data alone may be sufficient justification to advocate the use of local detention facilities in future dangerousness research. But these facilities offer additional advantages to the investigator. First, the data may be gathered closer to the time that the violent behavior was emitted. The delays caused by sentencing, transportation, institutional classification and final placement into a state-level correctional facility are eliminated. Second, a broad sample of the offender population is represented within these detention facilities. Although those individuals who post bond rapidly are lost from the sample, individuals receiving probation or sentenced to the detention facility remain in the sample. Third, local populations have not been subjected to the institutional classification procedures used to determine placement in specific correctional facilities. In addition, these individuals have not been subjected to the influences of a prison environment. While the detention facility may exert some environmental influences, the transient nature of its population does not result in development of the intense cultural pressures found in prisons.

In using local detention facilities for research, it is recommended that data be gathered across an extended time span. This would reduce the potential influences on the data due to fluctuations in law enforcement and criminal justice policies. The difficulties in single-year data collection schemes may be seen in the marked differences between the original and test samples used in this study.

Clearly, the use of initial charge classification and data collected earlier in the criminal justice process will not reduce the difficulties inherent in predicting dangerousness. However, it is felt that this return to minimally biased populations and accurate, behavior-based classifications is necessary to provide a firm, consistent foundation for future investigations. It is only by building slowly upon replicable research that the complex questions regarding individual dangerousness can be approached.

APPENDIX A

Date____________
Staff___________

FIRST APPEARANCE INTERVIEW

Name:____________________________Age/Race/Sex_____________DOB___________
Charge:____
Marital Status: S M S D W; Children__Home: yes__no__; Support: yes__no__
C.O.; yes__no__; Additional info:_____________________________________

I. COMMUNITY STABILITY

Address:___________________How long:___Own:__Rent:__How Much:__Phone:__
With Whom:_________________________Prev. Add. if applicable:____________
Time/Area:____________Time/State:__________Orig. From:_________________
Family/Relatives in area: yes__no__; Who/Where:________________________
Student: yes__no__; Where:___________________Study Field:______________
Contact person:____________________________________Phone:______________
Contact Person:____________________________________Phone:______________

II. FINANCIAL STANDING: (property = land, home, mobile home, cycle, car, boat, stocks and bonds, savings or checking accounts, stereo, anything of value)

Cash:__________Property:____
Employed: yes__no__; Ft.__Pt.__; take home pay:______How long:__________
Employer:________________________Doing what:____________Phone:__________
Previous employer (when, how long, take home):_________________________
How do you make ends meet:____
Military: yes__no__; When:____

III. PRIOR RECORD: (date, offense, place, disposition)

____
____
____
____
____

Probation (past/present) yes__no__; Parole (past/present); Where:_______
F.T.A. when/why_____________________________Prob. Officer:______________

IV. PERSONAL HISTORY:

Emergency needs: (major illness, injury, physical or mental pain);______
____
Current medication:________________For what:___________________________
Ever undergone any drug tx________alcohol________mental health program__
____
____

Overall Impressions: (sober, oriented, cooperative, nervous, hostile, evasive, etc.)

V. Booking Officer's Comments: (Any comments relative to an inmates community stability, behavior, attitude, emergency problems, degree of dangerousness, current state of physical and mental health, etc.)

____
____
____

APPENDIX B

INTAKE INTERVIEW

Date____________

Staff____________

Age/Race/Sex:____________

Name:________________________ Social Security #____________

Initial charge:______________________________

Additional charges:______________________________

Status: Bond__________; Hold: Yes__ No__

Attorney________ Disposition____________________

Goals____________________________________

Method____________________________________

Do you live in Alachua County? Yes__ No__ How long?_____ months

I. Family:

Contact person in case of emergency____________________

Number of siblings____________________________

Birth order among siblings________________________

Number of dependent children_______ ages_______

Other family dependents________________________

Stability of family unit________________________

____

II. Employment/Vocational

Parents primary occupation________________________

Military status__________ Benefits__________________

Skills/Training______________________________

Interests (if different from above)____________________

____

III. Education

Highest grade completed____ Regular classes____ Special Ed.________

Math level_______ Reading level_______

Interests____________________________________

IV. Adjustment to Incarceration

Inmates____________________________________

Staff____________________________________

Comments____________________________________

Intake Interview
Page 2

V. Medical

Present health (circle one): Good; Fair; Poor

Previous treatment, illnesses, accidents____________________

Present needs____________________

VI. Substance Dependency

Description	Amount/Chronicity

VII. Personal/Psychological

Prior Treatment	When/Where/How long
Drug	
Alcohol	
Outpatient Mental Health	
*Psychiatric Hospitalization	
Other	

VIII. Summary/Comments (impressions; personal problems or needs; recommended programs)

*If yes, get release of information form and order hospital records

MENTAL STATUS EXAMINATION

Name ______________________ Observer's Name ______________________

Notation Symbols
X = Determination made
HX = History: Described but not demonstrated

			Not Present	Slight or Occas.	Marked or Repeated
APPEARANCE		1. physically unkempt, unclean..........			
		2. clothing disheveled, dirty...........			
		3. clothing atypical, unusual, bizarre...			
		4. unusual physical characteristics......			

COMMENTS RE APPEARANCE:

BEHAVIOR	Posture	5. slumped............................			
		6. rigid, tense........................			
		7. atypical, inappropriate..............			
	Facial Expression Suggests	8. anxiety, fear, apprehension..........			
		9. depression, sadness..................			
		10. anger, hostility....................			
		11. decreased variability of expression...			
		12. bizarreness, inappropriateness........			
	General Body Movements	13. accelerated, increased speed..........			
		14. decreased, slowed....................			
		15. atypical, peculiar, inappropriate.....			
		16. restlessness, fidgety................			
	Amplitude and Quality of Speech	17. increased, loud......................			
		18. decreased, slowed....................			
		19. atypical quality, slurring, stammer...			
	Doctor-Patient Relationship	20. domineering..........................			
		21. submissive, overly compliant.........			
		22. provocative..........................			
		23. suspicious...........................			
		24. uncooperative........................			

COMMENTS RE BEHAVIOR:

MENTAL STATUS EXAMINATION

Name____________________ Observer's Name____________________

Notation Symbols
X = Determination made
HX = History: Described but not demonstrated

		Not Present	Slight or Occas.	Marked or Repeated
FEELING (AFFECT AND MOOD)	25. inappropriate to thought content......			
	26. increased lability of affect.........			
	predominant mood is: 27. blunted, absent, unvarying...........			
	28. euphoria, elation....................			
	29. anger, hostility.....................			
	30. fear, anxiety, apprehension..........			
	31. depression, sadness..................			

COMMENTS RE FEELING:

		Not Present	Slight or Occas.
PERCEPTION	32. illusions....................................		
	33. auditory hallucinations......................		
	34. visual hallucinations........................		
	35. other type of hallucinations.................		

COMMENTS RE PERCEPTION:

MENTAL STATUS EXAMINATION

Name ______________________ Observer's Name ______________________

			Not Present	Slight or Occas.
THINKING	Intellectual Functioning	36. impaired level of consciousness		
		37. impaired attention span		
		38. impaired abstract thinking		
		39. impaired calculation ability		
		40. impaired intelligence		
	Orientation	41. disoriented to person		
		42. disoriented to place		
		43. disoriented to time		
	Insight	44. difficulty in acknowledging the presence of psychological problems		
		45. mostly blames others or circumstances for problems		
	Judgment	46. impaired ability to manage daily living activities		
		47. impaired ability to make reasonable life decisions		
	Memory	48. impaired immediate recall		
		49. impaired recent memory		
		50. impaired remote memory		
	Thought Content	51. obsessions		
		52. compulsions		
		53. phobias		
		54. derealization...depersonalization		
		55. suicidal ideation		
		56. homicidal ideation		
		57. delusions		
		58. ideas of reference		
		59. ideas of influence		
	Stress of Thought (as manifested by speech)	60. association disturbance		
		61. thought flow decreased, slowed		
		62. thought flow increased		

COMMENTS RE THINKING:

APPENDIX C

NON-SIGNIFICANT ANALYSES OF DEMOGRAPHIC AND HISTORICAL VARIABLES

Table C-1

Initial Charge Classification and Sex

Sex	Initial Charge Non-Violent	Initial Charge Violent
Male	616	70
Female	78	11

$\chi^2 = 0.195$ N = 775 df = 1 p = NS

Note: In this and all subsequent tables, the symbol "NS" is used to indicate non-significant probabilities greater than .05.

Table C-2

Initial Charge Classification and Age

Initial Charge	N	Mean	T-value	p
Non-Violent	695	32.006	0.23	NS
Violent	81	31.630		

Table C-3

Initial Charge Classification and Race

Race	Initial Charge Non-Violent	Initial Charge Violent
White	420	42
Black	273	39
Other	1	0

$\chi^2 = 2.429$ N = 775 df = 2 p = NS

Table C-4

Initial Charge Classification and Marital Status

Marital Status	Initial Charge Non-Violent	Initial Charge Violent
Single	267	34
Married	114	21
Separated	33	4
Divorced	102	8
Widowed	11	3

$\chi^2 = 5.378$ N = 597 df = 4 p = NS

Table C-5

Initial Charge Classification and Subject's Occupation

	Initial Charge	
Occupation	Non-Violent	Violent
Unemployed	156	23
Unskilled	137	22
Skilled	129	15
Clerical	17	1
Professional	6	1
Student	46	4

$x^2 = 2.487$ N = 557 df = 5 p = NS

Table C-6

Initial Charge Classification and Years of Education

Initial Charge	N	Mean	T-value	p
Non-Violent	510	11.437	1.63	NS
Violent	70	10.886		

Table C-7

Initial Charge Classification and Parents' Occupation

	Initial Charge	
Occupation	Non-Violent	Violent
Unemployed	13	3
Unskilled	76	19
Skilled	52	9
Clerical	25	5
Professional	18	1
Student	0	0

$x^2 = 2.739$ N = 221 df = 4 p = NS

Table C-8

Initial Charge Classification and Birth Order

Birth Order	Initial Charge Non-Violent	Violent
First	63	14
Second	45	10
Third	28	10
Fourth	21	3
Fifth	9	1
Sixth	12	4
Seventh	5	0
Eighth	4	0
Ninth	1	1
Eleventh	1	0

$X^2 = 6.625$ N = 232 df = 9 p = NS

Table C-9

Initial Charge Classification and Number of Siblings

Number of Siblings	Initial Charge Non-Violent	Violent
0	21	5
1	23	7
2	23	7
3	26	8
4	19	4
5	12	5
6	21	3
7	9	0
8	7	1
9	6	0
10	1	1
11	6	0
12	2	0
14	1	0

$X^2 = 10.254$ N = 218 df = 13 p = NS

Table C-10

Initial Charge Classification and Drug Abuse

	Initial Charge	
Drug Abuse	Non-Violent	Violent
No	509	71
Yes	28	2

x^2 = 0.395 N = 610 df = 1 p = NS

Table C-11

Initial Charge Classification and Alcohol Abuse

	Initial Charge	
Alcohol Abuse	Non-Violent	Violent
No	356	48
Yes	173	22

x^2 = 0.006 N = 599 df = 1 p = NS

Table C-12

Initial Charge Classification and Prior Drug Treatment

	Initial Charge	
Drug Treatment	Non-Violent	Violent
No	507	73
Yes	27	2

x^2 = 0.385 N = 609 df = 1 p = NS

Table C-13

Initial Charge Classification and Prior Alcohol Treatment

	Initial Charge	
Alcohol Treatment	Non-Violent	Violent
No	440	68
Yes	93	7

x^2 = 2.588 N = 608 df = 1 p = NS

Table C-14

Initial Charge Classification and Outpatient Mental Health Treatment

Outpatient Treatment	Initial Charge Non-Violent	Initial Charge Violent
No	477	66
Yes	57	9

$X^2 = 0.028$ N = 609 df = 1 p = NS

Table C-15

Initial Charge Classification and Inpatient Mental Health Treatment

Inpatient Treatment	Initial Charge Non-Violent	Initial Charge Violent
No	483	66
Yes	60	9

$X^2 = 0.259$ N = 608 df = 1 p = NS

Table C-16

Initial Charge Classification and Previous Convictions

Previous Convictions	Initial Charge Non-Violent	Initial Charge Violent
None	397	38
Non-violent	253	34
Violent	45	9

$X^2 = 4.199$ N = 776 df = 2 p = NS

Table C-17

Initial Charge Classification and Prior Incarceration in Local Correctional Facilities

Incarceration	Initial Charge Non-Violent	Initial Charge Violent
No	635	76
Yes	60	5

$X^2 = 0.296$ N = 776 df = 1 p = NS

Table C-18

Initial Charge Classification and Prior Incarceration in State Correctional Facilities

Incarceration	Initial Charge Non-Violent	 Violent
No	635	69
Yes	60	12

$x^2 = 2.600$ N = 776 df = 1 p = NS

Table C-19

Initial Charge Classification and Months of Time Served in Local Correctional Facilities

Initial Charge	N	Mean	T-value	p
Non-violent	485	0.656	0.02	NS
Violent	68	0.647		

Table C-20

Initial Charge Classification and Months of Time Served in State Correctional Facilities

Initial Charge	N	Mean	T-value	p
Non-violent	484	5.860	-0.98	NS
Violent	68	10.088		

APPENDIX D

NON-SIGNIFICANT ANALYSES OF MENTAL STATUS DATA

Table D-1

Initial Charge Classification and Mental Status Items Assessing Appearance

Item 1: Physically unkempt, unclean

	Initial Charge	
Item Rating	Non-Violent	Violent
Not Present	163	42
Slight	16	2
Marked	0	0
History	0	0

$\chi^2 = 0.422$ N = 223 df = 1 p = NS

Item 2: Clothing disheveled or dirty

	Initial Charge	
Item Rating	Non-Violent	Violent
Not Present	156	40
Slight	22	4
Marked	0	0
History	0	0

$\chi^2 = 0.117$ N = 222 df = 1 p = NS

Item 3: Atypical, unusual or bizarre clothing

	Initial Charge	
Item Rating	Non-Violent	Violent
Not Present	173	44
Slight	2	0
Marked	3	0
History	0	0

$\chi^2 = 1.264$ N = 222 df = 2 p = NS

Item 4: Unusual physical characteristics

	Initial Charge	
Item Rating	Non-Violent	Violent
Not present	154	37
Slight	21	6
Marked	3	1
History	0	0

$\chi^2 = 0.190$ N = 222 df = 2 p = NS

Table D-2

Initial Charge Classification and Mental Status Items Assessing Behavior

Item 5: Slumped posture

Item Rating	Initial Charge Non-Violent	Violent
Not Present	164	39
Slight	15	4
Marked	0	0
History	0	0

$\chi^2 = 0.012$ N = 222 df = 1 p = NS

Item 6: Rigid or tense posture

Item Rating	Initial Charge Non-Violent	Violent
Not Present	167	38
Slight	12	5
Marked	0	0
History	0	0

$\chi^2 = 0.594$ N = 222 df = 1 p = NS

Item 7: Atypical or inappropriate posture

Item Rating	Initial Charge Non-Violent	Violent
Not Present	176	43
Slight	1	0
Marked	1	0
History	0	0

$\chi^2 = 0.488$ N = 221 df = 2 p = NS

Item 8: Anxious or fearful facial expression

Item Rating	Initial Charge Non-Violent	Violent
Not Present	131	34
Slight	46	8
Marked	2	0
History	0	0

$\chi^2 = 1.360$ N =221 df = 2 p = NS

Item 10: Angry or hostile facial expression

Item Rating	Initial Charge Non-Violent	Initial Charge Violent
Not Present	167	39
Slight	12	2
Marked	0	1
History	0	0

$\chi^2 = 4.465$ N = 221 df = 2 p = NS

Item 12: Bizarre or inappropriate facial expression

Item Rating	Initial Charge Non-Violent	Initial Charge Violent
Not Present	176	43
Slight	2	0
Marked	1	0
History	0	0

$\chi^2 = 0.731$ N = 222 df = 2 p = NS

Item 13: Accelerated body movements

Item Rating	Initial Charge Non-Violent	Initial Charge Violent
Not Present	177	42
Slight	2	1
Marked	0	0
History	0	0

$\chi^2 = 0.014$ N = 222 df = 1 p = NS

Item 15: Atypical or inappropriate body movements

Item Rating	Initial Charge Non-Violent	Initial Charge Violent
Not Present	174	42
Slight	4	0
Marked	1	0
History	0	0

$\chi^2 = 1.200$ N = 221 df = 2 p = NS

Item 16: Restlessness or fidgety body movements

Item Rating	Initial Charge Non-Violent	 Violent
Not Present	155	35
Slight	24	6
Marked	0	1
History	0	0

$\chi^2 = 4.323$ N = 221 df = 2 p = NS

Item 17: Loud Speech

Item Rating	Initial Charge Non-Violent	 Violent
Not Present	168	41
Slight	10	1
Marked	0	0
History	0	0

$\chi^2 = 0.223$ N = 220 df = 1 p = NS

Item 18: Low amplitude or slowed speech

Item Rating	Initial Charge Non-Violent	 Violent
Not Present	162	37
Slight	16	5
Marked	0	0
History	0	0

$\chi^2 = 0.082$ N = 220 df = 1 p = NS

Item 19: Atypical speech (stuttering, slurring)

Item Rating	Initial Charge Non-Violent	 Violent
Not Present	167	39
Slight	9	3
Marked	1	0
History	0	0

$\chi^2 = 0.508$ N = 219 df = 2 p = NS

Item 20: Domineering presentation

Item Rating	Initial Charge Non-Violent	Initial Charge Violent
Not Present	163	42
Slight	12	0
Marked	3	0
History	0	0

$\chi^2 = 3.798$ N = 220 df = 2 p = NS

Item 21: Submissive or overly compliant presentation

Item Rating	Initial Charge Non-Violent	Initial Charge Violent
Not Present	127	33
Slight	45	9
Marked	6	0
History	0	0

$\chi^2 = 1.865$ N = 220 df = 2 p = NS

Item 22: Provocative presentation

Item Rating	Initial Charge Non-Violent	Initial Charge Violent
Not Present	172	42
Slight	5	0
Marked	1	0
History	0	0

$\chi^2 = 1.455$ N = 220 df = 2 p = NS

Item 23: Suspicious presentation

Item Rating	Initial Charge Non-Violent	Initial Charge Violent
Not Present	159	36
Slight	17	6
Marked	2	0
History	0	0

$\chi^2 = 1.251$ N = 220 df = 2 p = NS

Item 24: Uncooperative presentation

Item Rating	Initial Charge Non-Violent	Initial Charge Violent
Not Present	174	41
Slight	4	1
Marked	0	0
History	0	0

$x^2 = 0.274$ N = 220 df = 1 p = NS

Table D-3

Initial Charge Classification and Mental Status Items Assessing Feeling

Item 25: Affect inappropriate to thought content

Item Rating	Initial Charge Non-Violent	Initial Charge Violent
Not Present	174	42
Slight	3	1
Marked	2	0
History	0	0

$\chi^2 = 0.562$ N = 222 df = 2 p = NS

Item 26: Increased lability of affect

Item Rating	Initial Charge Non-Violent	Initial Charge Violent
Not Present	175	41
Slight	4	1
Marked	0	0
History	0	0

$\chi^2 = 0.269$ N = 221 df = 1 p = NS

Item 27: Blunted, absent, or unvarying mood

Item Rating	Initial Charge Non-Violent	Initial Charge Violent
Not Present	159	36
Slight	17	8
Marked	1	0
History	0	0

$\chi^2 = 2.797$ N = 221 df = 2 p = NS

Item 28: Euphoria or elation

Item Rating	Initial Charge Non-Violent	Initial Charge Violent
Not Present	154	42
Slight	19	2
Marked	6	0
History	0	0

$\chi^2 = 3.213$ N = 223 df = 2 p = NS

Item 29: Anger or hostility

Item Rating	Initial Charge Non-Violent	 Violent
Not Present	167	39
Slight	11	4
Marked	0	0
History	0	0

$x^2 = 0.154$ N = 221 df = 1 p = NS

Item 30: Fear, anxiety or apprehension

Item Rating	Initial Charge Non-Violent	 Violent
Not Present	133	35
Slight	42	8
Marked	2	0
History	0	0

$x^2 = 1.063$ N = 220 df = 2 p = NS

Item 31: Depression or sadness

Item Rating	Initial Charge Non-Violent	 Violent
Not Present	131	26
Slight	38	15
Marked	4	2
History	0	0

$x^2 = 4.124$ N = 216 df = 2 p = NS

Table D-4

Initial Charge Classification and Mental Status Items Assessing Perception

Item 32: Illusions

Item Rating	Initial Charge Non-Violent	Initial Charge Violent
Not Present	156	42
Slight	3	0
Marked	1	0
History	1	0

$x^2 = 1.337$ N = 203 df = 3 p = NS

Item 33: Auditory hallucinations

Item Rating	Initial Charge Non-Violent	Initial Charge Violent
Not Present	154	40
Slight	6	2
Marked	0	0
History	2	1

$x^2 = 0.369$ N = 205 df = 2 p = NS

Item 34: Visual hallucinations

Item Rating	Initial Charge Non-Violent	Initial Charge Violent
Not Present	158	38
Slight	3	3
Marked	2	0
History	2	1

$x^2 = 4.198$ N = 207 df = 3 p = NS

Item 35: Other types of hallucinations

Item Rating	Initial Charge Non-Violent	Initial Charge Violent
Not Present	166	42
Slight	0	1
Marked	1	0
History	1	0

$x^2 = 4.423$ N = 211 df = 3 p = NS

Table D-5

Initial Charge Classification and Mental Status Items Assessing Thinking

Item 36: Impaired level of consciousness

Item Rating	Initial Charge Non-Violent	 Violent
Not Present	174	42
Slight	3	2
Marked	1	0
History	0	0

$X^2 = 1.548$ N = 222 df = 2 p = NS

Item 37: Impaired attention span

Item Rating	Initial Charge Non-Violent	 Violent
Not Present	167	39
Slight	11	3
Marked	1	1
History	0	0

$X^2 = 1.265$ N = 222 df = 2 p = NS

Item 38: Impaired abstract thinking

Item Rating	Initial Charge Non-Violent	 Violent
Not Present	131	31
Slight	34	10
Marked	10	2
History	0	0

$X^2 = 0.357$ N = 218 df = 2 p = NS

Item 39: Impaired calculation ability

Item Rating	Initial Charge Non-Violent	 Violent
Not Present	127	27
Slight	36	9
Marked	12	5
History	0	0

$X^2 = 1.443$ N = 216 df = 2 p = NS

Item 41: Disoriented to person

Item Rating	Initial Charge Non-Violent	Initial Charge Violent
Not Present	177	44
Slight	1	0
Marked	1	0
History	0	0

$X^2 = 0.496$ N = 223 df = 2 p = NS

Item 42: Disoriented to place

Item Rating	Initial Charge Non-Violent	Initial Charge Violent
Not Present	178	44
Slight	1	0
Marked	0	0
History	0	0

$X^2 = 0.581$ N = 223 df = 1 p = NS

Item 43: Disoriented to time

Item Rating	Initial Charge Non-Violent	Initial Charge Violent
Not Present	172	44
Slight	6	0
Marked	1	0
History	0	0

$X^2 = 1.776$ N = 223 df = 2 p = NS

Item 44: Difficulty in acknowledging the presence of psychological problems

Item Rating	Initial Charge Non-Violent	Initial Charge Violent
Not Present	132	32
Slight	37	9
Marked	5	0
History	1	0

$X^2 = 1.446$ N = 216 df = 3 p = NS

Item 45: Projection of blame for problems onto others or circumstances

Item Rating	Initial Charge Non-Violent	 Violent
Not Present	112	33
Slight	43	9
Marked	17	0
History	0	0

$X^2 = 5.230$ N = 214 df = 2 p = NS

Item 46: Impaired ability to manage daily living activities

Item Rating	Initial Charge Non-Violent	 Violent
Not Present	115	32
Slight	53	10
Marked	6	1
History	0	0

$X^2 = 1.104$ N = 217 df = 2 p = NS

Item 47: Impaired ability to make reasonable life decisions

Item Rating	Initial Charge Non-Violent	 Violent
Not Present	101	28
Slight	54	15
Marked	8	0
History	0	0

$X^2 = 2.196$ N = 206 df = 2 p = NS

Item 48: Impaired immediate recall

Item Rating	Initial Charge Non-Violent	 Violent
Not Present	159	39
Slight	14	4
Marked	5	0
History	0	0

$X^2 = 1.303$ N = 221 df = 2 p = NS

Item 49: Impaired recent memory

Item Rating	Initial Charge Non-Violent	Violent
Not Present	168	39
Slight	9	3
Marked	1	0
History	0	1

$x^2 = 4.667$ N = 221 df = 3 p = NS

Item 50: Impaired remote memory

Item Rating	Initial Charge Non-Violent	Violent
Not Present	172	40
Slight	5	3
Marked	0	0
History	0	0

$x^2 = 0.723$ N = 220 df = 1 p = NS

Item 51: Obsessions

Item Rating	Initial Charge Non-Violent	Violent
Not Present	139	40
Slight	5	1
Marked	4	0
History	1	0

$x^2 = 1.524$ N = 190 df = 3 p = NS

Item 52: Compulsions

Item Rating	Initial Charge Non-Violent	Violent
Not Present	146	39
Slight	1	1
Marked	0	0
History	0	0

$x^2 = 0.016$ N = 187 df = 1 p = NS

Item 53: Phobias

Item Rating	Initial Charge Non-Violent	Violent
Not Present	150	33
Slight	11	8
Marked	3	1
History	2	0

X^2 = 6.754 N = 208 df = 3 p - NS

Item 54: Derealization or depersonalization

Item Rating	Initial Charge Non-Violent	Violent
Not Present	160	40
Slight	11	3
Marked	1	0
History	0	0

X^2 = 0.268 N = 215 df = 2 p = NS

Item 55: Suicidal ideation

Item Rating	Initial Charge Non-Violent	Violent
Not Present	156	33
Slight	9	6
Marked	1	1
History	3	0

X^2 = 6.503 N = 209 df = 3 p = NS

Item 56: Homicidal ideation

Item Rating	Initial Charge Non-Violent	Violent
Not Present	157	36
Slight	13	5
Marked	0	1
History	1	0

X^2 = 5.194 N = 213 df = 3 p = NS

Item 57: Delusions

	Initial Charge	
Item Rating	Non-Violent	Violent
Not Present	164	43
Slight	3	0
Marked	4	0
History	0	0

$X^2 = 1.820$ N = 214 df = 2 p = NS

Item 58: Ideas of reference

	Initial Charge	
Item Rating	Non-Violent	Violent
Not Present	164	40
Slight	5	1
Marked	0	1
History	0	0

$X^2 = 4.075$ N = 211 df = 2 p = NS

Item 59: Ideas of influence

	Initial Charge	
Item Rating	Non-Violent	Violent
Not Present	161	40
Slight	9	0
Marked	3	1
History	1	0

$X^2 = 2.537$ N = 215 df = 3 p = NS

Item 60: Associational disturbance

	Initial Charge	
Item Rating	Non-Violent	Violent
Not Present	173	39
Slight	4	1
Marked	1	0
History	0	0

$X^2 = 0.234$ N = 218 df = 2 p = NS

Item 61: Decreased or slowed thought flow

Item Rating	Initial Charge Non-Violent	Violent
Not Present	168	38
Slight	9	3
Marked	0	0
History	0	0

X^2 = 0.034 N = 218 df = 1 p = NS

Item 62: Increased thought flow

Item Rating	Initial Charge Non-Violent	Violent
Not Present	172	39
Slight	2	2
Marked	3	0
History	0	0

X^2 = 3.258 N = 218 df = 2 p = NS

APPENDIX E

NON-SIGNIFICANT DISCRIMINANT FUNCTION ANALYSIS

Table E-1

Discriminant Function Analysis of WAIS Data Grouped by Convicted Charge Classification

Canonical Correlation	Wilks' lambda	Chi-square	df	Significance
0.541	0.707	11.423	4	0.022

Standardized Discriminant Function Coefficients

WAIS variable	Coefficient
Comprehension	-0.680
Digit Span	-0.486
Block Design	-0.914
Performance I.Q.	2.070

Centroids of Convicted Charge Groups (Mean function scores)

Non-Violent	-0.235
Violent	1.213

Classification Function Coefficients

	Coefficients	
WAIS variable	Non-Violent	Violent
Comprehension	-3.847	-4.240
Digit Span	-0.058	-0.408
Block Design	-5.501	-6.249
Performance I.Q.	2.525	2.857
Constant	-76.358	-95.594

Prediction Results with Original Data

	Predicted Group	
Convicted Charge Group	Non-Violent	Violent
Non-Violent	27	4
Violent	1	5

N = 37 Percentage of cases correctly classified: 86.49%

APPENDIX F

COMPARISONS OF PREDICTED AND ACTUAL GROUP MEMBERSHIPS OF TEST SUBJECTS

Table F-1

A Comparison of Predicted and Actual Group Memberships of Test Subjects Using Functions Derived from Initial Charge Groups

Predictions Based on WAIS Data

Actual Initial Charge	Predicted Group Non-Violent	 Violent
Non-Violent	5	6
Violent	6	7

N = 24 Percentage of cases correctly classified: 50.00%

Predictions Based on MMPI Data

Actual Initial Charge	Predicted Group Non-Violent	 Violent
Non-Violent	7	0
Violent	8	2

N = 17 Percentage of cases correctly classified: 52.94%

Predictions Based on Rorschach Data

Actual Initial Charge	Predicted Group Non-Violent	 Violent
Non-Violent	7	3
Violent	10	2

N = 22 Percentage of cases correctly classified: 40.91%

Table F-2

A Comparison of Predicted and Actual Group Memberships of Test Subjects Using Functions Derived from Convicted Charge Groups

Predictions Based on MMPI Data

Actual Convicted Charge	Predicted Group Non-Violent	 Violent
Non-Violent	6	1
Violent	9	1

N = 17 Percentage of cases correctly classified: 41.18%

Predictions Based on Rorschach Data

Actual Convicted Charge	Predicted Group Non-Violent	 Violent
Non-Violent	7	5
Violent	7	3

N = 22 Percentage of cases correctly classified: 45.45%

APPENDIX G

COMPARISONS OF ORIGINAL AND TEST SUBJECT GROUPS ON DEMOGRAPHIC AND HISTORICAL VARIABLES

Table G-1

Subject Groups and Years of Education

Subject Groups	N	Mean	T-value	p
Original	37	11.135	2.23	0.029
Test	26	10.000		

Table G-2

Subject Groups and Initial Charge Classifications

	Subject Group	
Initial Charge	Original	Test
Non-Violent	28	12
Violent	8	13

$\chi^2 = 4.551$ N = 61 df = 1 p = 0.033

Table G-3

Subject Group and Convicted Charge Classification

	Subject Group	
Convicted Charge	Original	Test
Non-Violent	29	13
Violent	7	12

$\chi^2 = 4.357$ N = 61 df = 1 p = 0.037

Table G-4

Subject Group and Drug Abuse

	Subject Group	
Drug Abuse	Original	Test
No	35	17
Yes	4	9

$\chi^2 = 4.363$ N = 65 df = 1 p = 0.037

Table G-5

Subject Group and Alcohol Abuse

	Subject Group	
Alcohol Abuse	Original	Test
No	27	9
Yes	11	17

$\chi^2 = 7.680$ N = 64 df = 1 p = 0.005

Table G-6

Subject Group and Outpatient Mental Health Treatment

	Subject Group	
Outpatient Treatment	Original	Test
No	34	15
Yes	4	11

$\chi^2 = 7.009$ N = 64 df = 1 p = 0.008

Table G-7

Subject Group and Age

Subject Group	N	Mean	T-value	p
Original	39	26.359	1.31	NS
Test	26	23.115		

Table G-8

Subject Group and Sex

	Subject Group	
Sex	Original	Test
Male	36	22
Female	3	4

$\chi^2 = 0.327$ N = 65 df = 1 p = NS

Table G-9

Subject Group and Race

Race	Subject Group Original	 Test
White	21	15
Black	18	11
Other	0	0

$\chi^2 = 0.003$ N = 65 df = 1 p = NS

Table G-10

Subject Group and Subject's Occupation

Occupation	Subject Group Original	 Test
Unemployed	17	11
Unskilled	6	8
Skilled	10	2
Clerical	.1	0
Professional	0	0
Student	4	2

$\chi^2 = 5.197$ N = 61 df = 4 p = NS

Table G-11

Subject Group and Marital Status

Marital Status	Subject Group Original	 Test
Single	25	22
Married	5	1
Separated	2	1
Divorced	6	2
Widowed	0	0

$\chi^2 = 3.049$ N = 64 df = 3 p = NS

Table G-12

Subject Group and Previous Convictions

Previous Convictions	Subject Group Original	 Test
None	18	10
Non-Violent	15	12
Violent	6	4

$\chi^2 = 0.437$ N = 65 df = 2 p = NS

Table G-13

Subject Group and Months of Time Served in Local Correctional Facilities

Subject Group	N	Mean	T-value	p
Original	36	2.861	0.27	NS
Test	22	2.136		

Table G-14

Subject Group and Months of Time Served in State Correctional Facilities

Subject Group	N	Mean	T-value	p
Original	36	7.000	0.51	NS
Test	21	5.143		

Table G-15

Subject Group and Diagnosis

Diagnosis	Subject Group Original	 Test
Schizophrenia	1	4
Affective psychosis	0	1
Reactive psychosis	0	1
Depressive neurosis	3	2
Antisocial personality	4	9
Alcoholism	2	0

$\chi^2 = 6.548$ N = 27 df = 5 p = NS

Table G-16

Subject Group and Prior Drug Treatment

	Subject Group	
Drug Treatment	Original	Test
No	34	22
Yes	4	4

$\chi^2 = 0.037$ N = 64 df = 1 p = NS

Table G-17

Subject Group and Prior Alcohol Treatment

	Subject Group	
Alcohol Treatment	Original	Test
No	32	20
Yes	6	6

$\chi^2 = 0.166$ N = 64 df = 1 p = NS

Table G-18

Subject Group and Inpatient Mental Health Treatment

	Subject Group	
Inpatient Treatment	Original	Test
No	32	19
Yes	6	7

$\chi^2 = 0.594$ N = 64 df = 1 p = NS

APPENDIX H

A COMPARISON OF RAPID RELEASE AND INCARCERATED SUBJECTS ON DEMOGRAPHIC AND HISTORICAL VARIABLES

Table H-1

Subject Group and Race

Race	Subject Group Released	 Incarcerated
White	339	123
Black	197	115
Other	1	0

$\chi^2 = 9.613$ N = 775 df = 2 p = .008

Table H-2

Subject Group and Subject's Occupation

Occupation	Subject Group Released	 Incarcerated
Unemployed	95	84
Unskilled	114	45
Skilled	108	36
Clerical	15	3
Professional	5	2
Student	39	11

$\chi^2 = 26.575$ N = 557 df = 5 p = .000

Table H-3

Subject Group and Drug Abuse

Drug Abuse	Subject Group Released	 Incarcerated
No	365	215
Yes	8	22

$\chi^2 = 14.300$ N = 610 df = 1 p = .000

Table H-4

Subject Group and Alcohol Abuse

Alcohol Abuse	Subject Group Released	 Incarcerated
No	263	141
Yes	100	95

$\chi^2 = 9.945$ N = 599 df = 1 p = .002

Table H-5

Subject Group and Age

Subject Group	N	Mean	T-value	p
Released	538	32.597	2.00	.046
Incarcerated	238	30.542		

Table H-6

Subject Group and Years of Education

Subject Group	N	Mean	T-value	p
Released	346	11.584	2.36	.018
Incarcerated	234	11.056		

Table H-7

Subject Group and Initial Charge Classification

Initial Charge	Subject Group Released	 Incarcerated
Non-Violent	501	194
Violent	37	44

$\chi^2 = 22.566$ N = 776 df = 1 p = .000

Table H-8

Subject Group and Convicted Charge Classification

Convicted Charge	Subject Group Released	 Incarcerated
Non- Violent	531	205
Violent	7	33

$\chi^2 = 50.742$ N = 776 df = 1 p = .000

Table H-9

Subject Group and Previous Convictions

Previous Convictions	Subject Group Released	 Incarcerated
None	334	101
Non-Violent	183	104
Violent	21	33

χ^2 = 39.075 N = 776 df = 2 p = .000

Table H-10

Subject Group and Prior Incarceration in Local Correctional Facilities

Prior Incarceration	Subject Group Released	 Incarcerated
No	504	207
Yes	34	31

χ^2 = 8.813 N = 776 df = 1 p = .003

Table H-11

Subject Group and Prior Incarceration in Stabe Correctional Facilities

Prior Incarceration	Subject Group Released	 Incarcerated
No	524	180
Yes	14	58

χ^2 = 90.314 N = 776 df = 1 p = .000

Table H-12

Subject Group and Months of Time Served in State Correctional Facilities

Subject Group	N	Mean	T-value	p
Released	361	2.380	-4.36	.000
Incarcerated	191	13.942		

Table H-13

Subject Group and Diagnosis

Diagnosis	Subject Group Released	 Incarcerated
Schizophrenia	9	9
Affective psychosis	2	2
Reactive psychosis	0	2
Depressive neurosis	1	6
Paranoid personality	0	3
Antisocial personality	0	9
Inadequate personality	0	2
Alcoholism	3	13
Transient situational disturbance	0	1
Non-psychotic organic brain syndrome with alcohol	1	0

$\chi^2 = 16.583$ N = 63 df = 9 p = .056

Table H-14

Subject Group and Prior Drug Treatment

Drug Treatment	Subject Group Released	 Incarcerated
No	363	217
Yes	10	19

$\chi^2 = 8.045$ N = 609 df = 1 p = .005

Table H-15

Subject Group and Prior Alcohol Treatment

Alcohol Treatment	Subject Group Released	 Incarcerated
No	321	187
Yes	51	49

$\chi^2 = 4.726$ N = 608 df = 1 p = .030

Table H-16

Subject Group and Outpatient Mental Health Treatment

	Subject Group	
Outpatient Treatment	Released	Incarcerated
No	346	197
Yes	27	39

$\chi^2 = 11.958$ N = 609 df = 1 p = .000

Table H-17

Subject Group and Inpatient Mental Health Treatment

	Subject Group	
Inpatient Treatment	Released	Incarcerated
No	353	196
Yes	20	39

$\chi^2 = 19.502$ N = 608 df = 1 p = .000

Table H-18

Subject Group and Sex

	Subject Group	
Sex	Released	Incarcerated
Male	474	212
Female	63	26

$\chi^2 = 0.041$ N = 775 df = 1 p = .839

Table H-19

Subject Group and Marital Status

	Subject Group	
Marital Status	Released	Incarcerated
Single	192	109
Married	89	46
Separated	22	15
Divorced	65	45
Widowed	11	3

$\chi^2 = 2.908$ N = 597 df = 4 p = .573

Table H-20

Subject Group and Months of Time Served in Local Correctional Facilities

Subject Group	N	Mean	T-value	p
Released	362	0.351	-1.79	.075
Incarcerated	191	1.230		

APPENDIX I

A COMPARISON OF THE PSYCHOLOGICALLY-EVALUATED SUBJECTS AND THE REMAINDER OF THE INCARCERATED GROUP

Table I-1

Subject Group and Sex

	Subject Group	
Sex	Evaluated	Remainder
Male	179	33
Female	23	3

$\chi^2 = 0.063$ N = 238   df = 1   p = NS

Table I-2

Subject Group and Age

Subject Group	N	Mean	T-value	p
Evaluated	202	31.188	1.91	NS
Remainder	36	26.917		

Table I-3

Subject Group and Race

	Subject Group	
Race	Evaluated	Remainder
White	104	19
Black	98	17
Other	0	0

$\chi^2 = 0.001$ N = 238   df = 1   p = NS

Table I-4

Subject Group and Marital Status

	Subject Group	
Marital Status	Evaluated	Remainder
Single	87	22
Married	41	5
Separated	13	2
Divorced	39	6
Widowed	3	0

$\chi^2 = 3.200$ N = 218   df = 4   p = NS

Table I-5

Subject Group and Subject's Occupation

Occupation	Subject Group Evaluated	 Remainder
Unemployed	69	15
Unskilled	39	6
Skilled	26	10
Clerical	2	1
Professional	2	0
Student	8	3

$\chi^2 = 4.103$ N = 181 df = 5 p = NS

Table I-6

Subject Group and Years of Education

Subject Group	N	Mean	T-value	p
Evaluated	200	11.065	0.13	NS
Remainder	34	11.000		

Table I-7

Subject Group and Drug Abuse

Drug Abuse	Subject Group Evaluated	 Remainder
No	181	34
Yes	20	2

$\chi^2 = 0.276$ N = 237 df = 1 p = NS

Table I-8

Subject Group and Alcohol Abuse

Alcohol Abuse	Subject Group Evaluated	 Remainder
No	116	25
Yes	85	10

$\chi^2 = 1.797$ N = 236 df = 1 p = NS

Table I-9

Subject Group and Prior Drug Treatment

	Subject Group	
Drug Treatment	Evaluated	Remainder
No	185	32
Yes	16	3

$\chi^2 = 0.046$ N = 236 df = 1 p = NS

Table I-10

Subject Group and Prior Alcohol Treatment

	Subject Group	
Alcohol Treatment	Evaluated	Remainder
No	157	30
Yes	44	5

$\chi^2 = 0.637$ N = 236 df = 1 p = NS

Table I-11

Subject Group and Outpatient Mental Health Treatment

	Subject Group	
Outpatient Treatment	Evaluated	Remainder
No	165	32
Yes	36	3

$\chi^2 = 1.269$ N = 236 df = 1 p = NS

Table I-12

Subject Group and Inpatient Mental Health Treatment

	Subject Group	
Inpatient Treatment	Evaluated	Remainder
No	166	30
Yes	34	5

$\chi^2 = 0.023$ N = 235 df = 1 p = NS

Table I-13

Subject Group and Diagnosis

Diagnosis	Subject Group Evaluated	 Remainder
Schizophrenia	9	0
Affective psychosis	2	0
Reactive psychosis	2	0
Depressive neurosis	3	3
Paranoid personality	3	0
Antisocial personality	5	4
Inadequate personality	2	0
Alcoholism	11	2
Transient situational disturbance	1	0

$\chi^2 = 12.027$ N = 47   df = 8   p = NS

Table I-14

Subject Group and Initial Charge Classification

Initial Charge	Subject Group Evaluated	 Remainder
Non-Violent	166	28
Violent	36	8

$\chi^2 = 0.155$ N = 238   df = 1   p = NS

Table I-15

Subject Group and Convicted Charge Classification

Convicted Charge	Subject Group Evaluated	 Remainder
Non-Violent	176	29
Violent	26	7

$\chi^2 = 0.624$ N = 238   df = 1   p = NS

Table I-16

Subject Group and Previous Convictions

Previous Convictions	Subject Group Evaluated	 Remainder
None	85	16
Non-Violent	90	14
Violent	27	6

$\chi^2 = 0.505$ N = 238   df = 2   p = NS

Table I-17

Subject Group and Prior Incarceration in Local Correctional Facilities

	Subject Group	
Prior Incarceration	Evaluated	Remainder
No	174	33
Yes	28	3

$\chi^2 = 0.408$ N = 238 df = 1 p = NS

Table I-18

Subject Group and Months of Time Served in Local Correctional Facilities

Subject Group	N	Mean	T-value	p
Evaluated	158	0.835	-0.88	NS
Remainder	33	3.121		

Table I-19

Subject Group and Prior Incarceration in State Correctional Facilities

	Subject Group	
Prior Incarceration	Evaluated	Remainder
No	152	28
Yes	50	8

$\chi^2 = 0.013$ N = 238 df = 1 p = NS

Table I-20

Subject Group and Months of Time Served in State Correctional Facilities

Subject Group	N	Mean	T-value	p
Evaluated	158	15.260	1.91	NS
Remainder	33	7.636		

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BIOGRAPHICAL SKETCH

Senah Elizabeth Green was born in Memphis, Tennessee, on August 18, 1952. In June, 1970, she was graduated from White Station High School. She then attended Oberlin College, Oberlin, Ohio, receiving her Bachelor of Arts in June, 1973. Ms. Green spent her summers working as a teaching assistant for the National Science Foundation's Student Science Training Programs at Loyola University, New Orleans, Louisiana, and San Diego State University, San Diego, California.

From September, 1973, through June, 1974, Senah Green was employed as a computer programmer for the economic research divisions of Cook Industries, Inc., Memphis, Tennessee. In September, 1974, she was admitted to the Graduate School of the University of Florida. During her first two years of graduate study in clinical psychology, Ms. Green was the recipient of a U.S. Public Health Service fellowship. From July, 1976, through August, 1978, she was employed half-time as a classification and rehabilitation specialist at the Alachua County Correction Center in Gainesville, Florida.

Senah Green received her Master of Science degree in clinical psychology in August, 1977. She is currently completing a clinical internship at Fort Logan Mental Health Center in Denver, Colorado.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Jacquelin R Goldman
Jacquelin R. Goldman, Chairman
Professor of Clinical Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Hugh Davis
Hugh C. Davis
Professor of Clinical Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Paul Satz
Paul Satz
Professor of Clinical Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Richard M. Swanson
Professor of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Patricia A. Clunn
Assistant Professor of Nursing

This dissertation was submitted to the Graduate Faculty of the Department of Clinical Psychology in the College of Liberal Arts and Sciences and to the Graduate Council, and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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Dean, Graduate School